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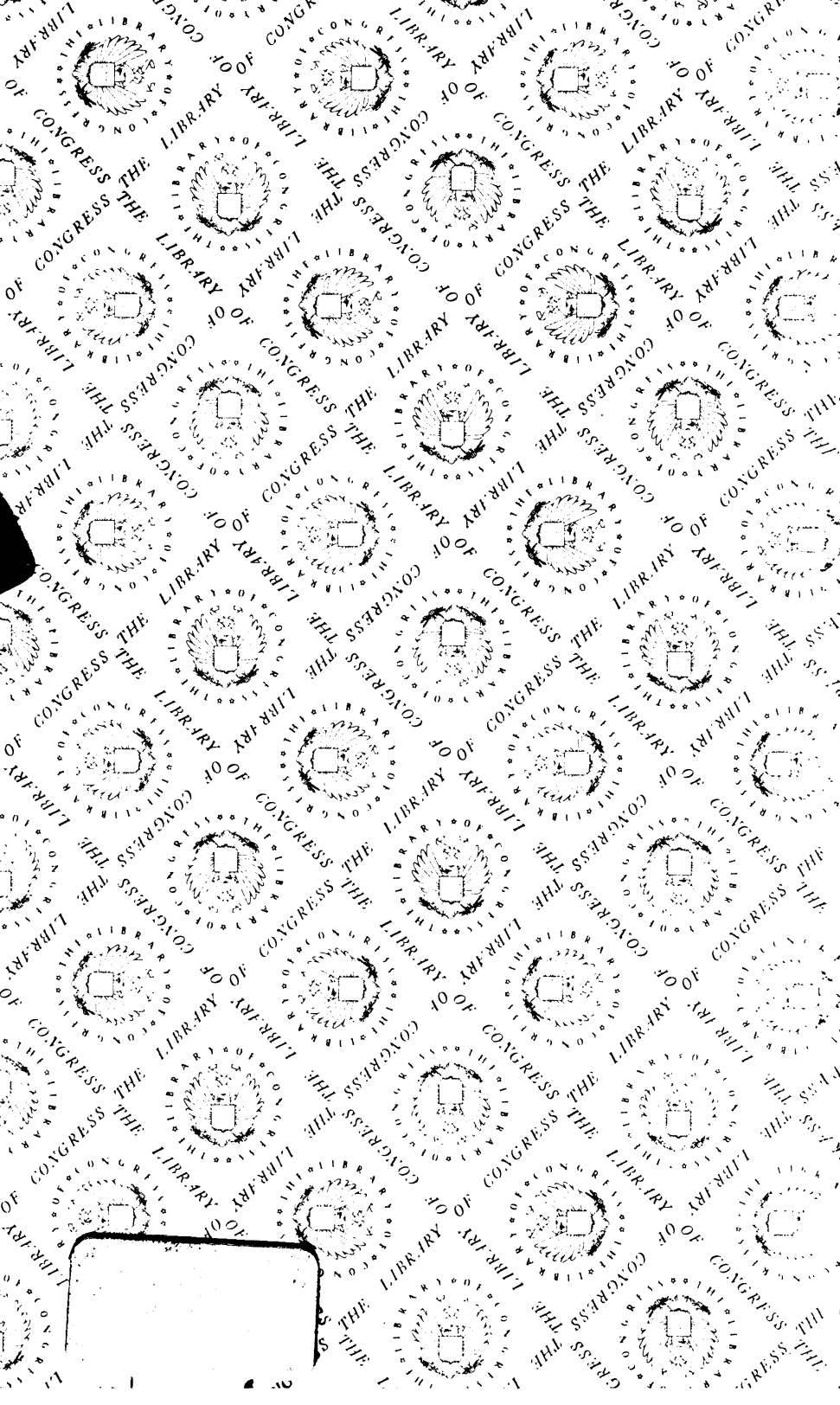
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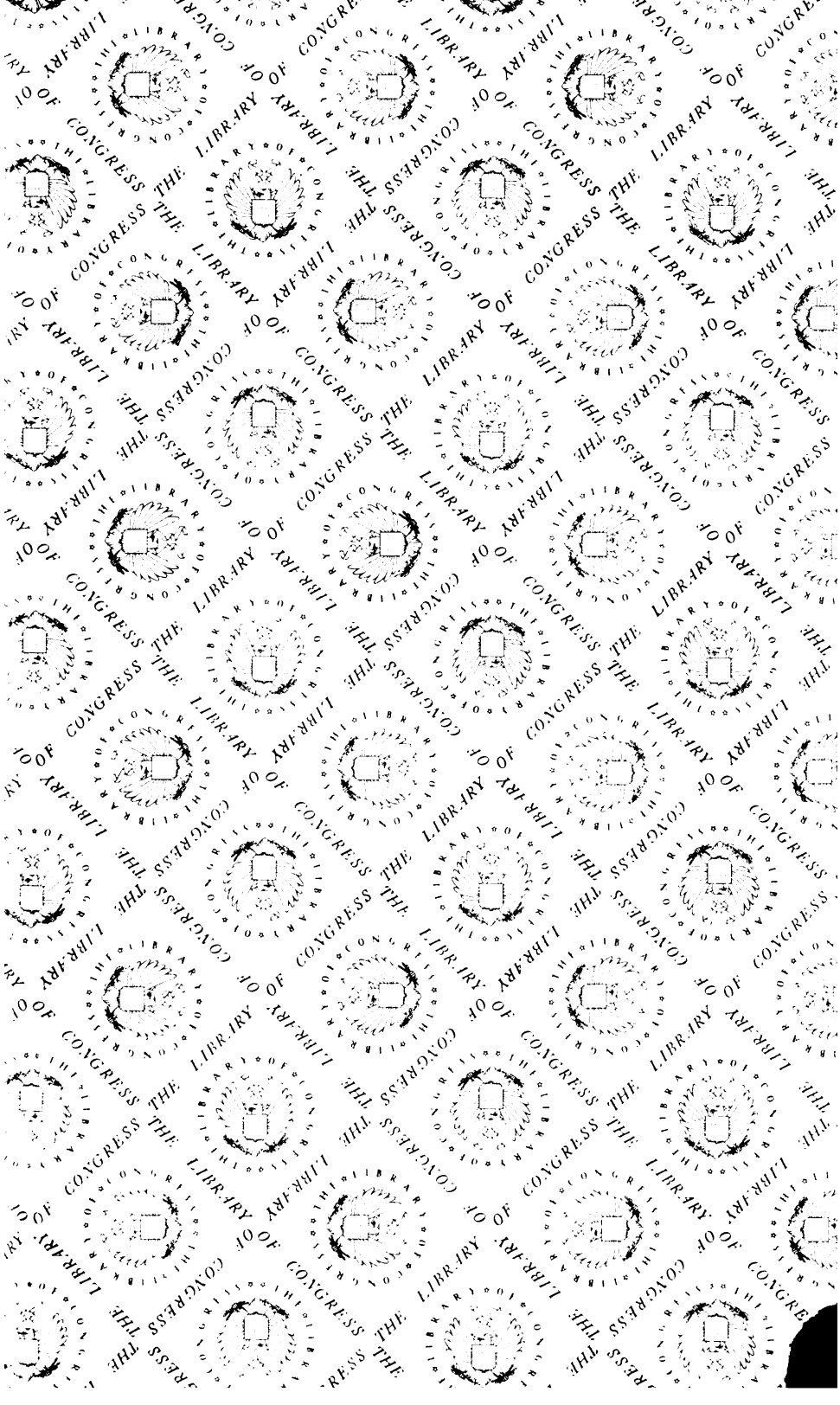
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AUTOMATIC COUPLERS AND POWER-BRAKES.

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HEARINGS

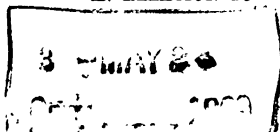
BEFORE THE

U.S. Congress, Senate,

COMMITTEE ON INTERSTATE COMMERCE,

UNITED STATES SENATE,

IN RELATION TO



SAFETY COUPLERS AND POWER-BRAKES ON
FREIGHT-CARS.

WASHINGTON:
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AUTOMATIC COUPLERS AND POWER-BRAKES.

HEARINGS BEFORE THE COMMITTEE ON INTERSTATE COMMERCE, UNITED STATES SENATE, IN RELATION TO AUTOMATIC COUPLERS AND POWER-BRAKES ON FREIGHT-CARS.

WASHINGTON, D. C., *April 30, 1890.*

The committee met at 10 o'clock a. m.

Present: Senators Cullom (chairman), Platt, Blair, Wilson, Hiscock, Harris, Reagan, and Barbour.

The CHAIRMAN. We will hear Mr. Coffin now.

STATEMENT OF MR. L. S. COFFIN.

The CHAIRMAN. What is your full name?

Mr. COFFIN. L. S. Coffin.

The CHAIRMAN. You are aware that there are three separate bills before the committee; one of which was introduced by the Senator from Massachusetts [Mr. Hoar]; one by the Senator from Iowa [Mr. Allison], and the other by myself, of which you have copies, I believe.

Mr. COFFIN. Yes, sir.

The CHAIRMAN. All looking to the adoption of automatic couplers, etc. You can address yourself to the subject as specifically as you desire.

Mr. COFFIN. The very fact, Mr. Chairman and gentlemen of the committee, that a bill has been introduced by the honorable chairman of this committee will embarrass me somewhat.

The CHAIRMAN. You need not be embarrassed about it at all. Say what you please about it, without any reference to where the bill comes from.

Senator HARRIS. We want your opinion wholly independent of the provisions of any pending bill.

Mr. COFFIN. That is what I want to give you.

The CHAIRMAN. And whatever defects you may discover in any one of the three bills please state.

Mr. HARRIS. Criticise them with the utmost freedom.

Mr. COFFIN. The bill presented by Senator Allison is the result of several years of very close investigation with experimental trains and of very intimate relations with railroad experts on my part. That is the bill I want to bring most forcibly before you, and I will take the liberty, as you have given it to me, to speak what I apprehend to be the defects of the other bills.

It may be necessary for me, in order to emphasize what I have to say, to lay before the committee some of the terrible facts that confront us.

The CHAIRMAN. We would be glad to have them.

Mr. COFFIN. The statistics and especially the report of the Interstate Commerce Commission will give all that I need. The statistics show that in this nation there are not less than some thirty-two or thirty-three thousand railway employes either killed or mangled, more or less, for life—crippled in their daily work.

The CHAIRMAN. In a year?

Mr. COFFIN. Yes, sir; yearly. It is difficult to arrive at the exact number injured by the link and pin coupling and the hand-brake, which will be the two points that I want to make here.

My estimate makes it something like over 7,000 in this nation every year who are either killed or crippled for life from those two causes alone, and I will give you the basis of that estimation.

The law providing for the Iowa railway commission went into effect in 1878. I joined it in 1883 and left it in 1888. We commenced the report when we had about 4,000 miles of road, and we had 8,000 miles in 1888. The law requires the railroads to report to the commission all these casualties. Those ten years show that two thousand four hundred and twenty-six of our young men in our State on that average of 6,000 miles of road were killed or crippled by those two causes. The report for 1888 shows that three hundred and fifty-four were killed. Now, taking that as a basis—we have 8,000 miles of road in round numbers, and there are 165,000 miles in the United States—taking that as a basis, that gives us seven thousand and eighty from these two causes alone in this nation.

Senator BLAIR. You do not mean seven thousand and eighty?

Mr. COFFIN. Yes, sir; seven thousand and eighty in this nation.

Senator BLAIR. It must be twenty-seven thousand and eighty.

Mr. COFFIN. I am speaking of the two causes alone, not taking any other accidents.

I have in my hand two or three pages of the last report of the Kentucky commission, and in dwelling on this particular matter the commissioners say:

In this State the number of accidents from the causes under consideration—

That is the link and pin coupling and the hand-brake—

in proportion to railroad mileage is greater than in Iowa. We report 286 accidents on fourteen roads, having a mileage of one-fourth the Iowa railroad mileage, and yet are but 66 behind the Iowa record of last year in injuries to brakemen from the two causes in question. This indicates the estimate based on Iowa returns to be much below the fact.

Taking the estimate in Kentucky, it gives us the enormous number of twenty-two thousand people in this nation crippled and killed by those two causes.

Senator HARRIS. The two causes you refer to are the ordinary couplers and hand-brakes?

Mr. COFFIN. Yes, sir; those two causes alone. I shall confine myself to those two causes alone.

Senator REAGAN. What do you mean by hand-brakes?

Mr. COFFIN. Those are the brakes to operate which it requires the men to go on top of the cars. In the report of the Commissioners you will find that a great many accidents occur, such as "falling from trains," or "struck by overhead bridges." It is because the men have to be on top of the cars.

Senator BLAIR. Do you confine yourself to freight-cars?

Mr. COFFIN. Yes, sir; freight-cars entirely. You never see an account of a boy being killed by a passenger-car.

The CHAIRMAN. I believe the bill does not go beyond freight-cars.

Mr. COFFIN. It does not.

Here is another very interesting matter. I stand here as the spokesman of the Order of Railway Brakemen. I have a full commission in my pocket to act for them in all matters of safety appliances. At their national convention, their sixth annual convention at St. Paul, last fall, an estimate was made. That is the end of their fiscal year. Their average for that year was about ten thousand, and the maximum sum that they pay out for disability is \$1,000. Those boys, on an average of a little less than ten thousand, last year paid out a quarter of a million of dollars for disability out of their hard-earned wages. This year their number is such that they will have to pay out over a half a million of dollars for disability. Three-quarters of that comes from this coupling of cars and the using of hand-brakes.

Now, there is a wonderful fact.

The CHAIRMAN. What report have you there?

Mr. COFFIN. I have the last report of the Interstate Commerce Commission, from which I shall quote pretty freely soon.

That is all I need to say. Just keep this in your mind, gentlemen, that in this nation, from those two causes alone, at least twenty families a day have to have either the undertaker or the surgeon. What that means, you can realize better than I can tell you.

Now the remedy. I apprehend that this bill which was introduced by Senator Allison will meet this, and it is the only bill that will meet it at once.

Senator HARRIS. Before you proceed to the remedy, let me inquire if you have any statistics showing what portion of these injuries result from coupling and what proportion from the use of hand-breaks?

Mr. COFFIN. I could have had that from the Iowa reports if I had thought that that question would have been asked.

Senator HARRIS. Can you not give us your recollection as to the general facts?

Mr. COFFIN. The injuries received are greater from the couplings. The fatalities are greater from the brakes. We find in our reports in Iowa that about one in three is killed in accidents from brakes; that means of the men who handle the brakes one in three is killed when accidents occur from that cause. I will place in the hands of the chairman those estimates.

Allow me just one minute more to emphasize this. The other morning when you took up your daily papers and learned of that terrible calamity which had visited Louisville, you were all shocked; the whole nation was anxious and ready to give relief.

Let me say that every month in the year there are more of these strong young men cut to pieces than were persons killed in all that terrible calamity at Louisville. The public does not realize this. They drop here and there and everywhere. You do not realize it. Here I have grouped together just a month's work of this kind. I will leave one with you when I have finished.

The CHAIRMAN. You had better give a copy of it to the stenographer, so that it can be incorporated in your remarks.

The statement is as follows:

[Taken from the Railway Age.]

THE TERRIBLE RECORD FOR ONE MONTH.

FEARFUL SACRIFICE OF LIFE AND LIMB SUFFERED BY THE RAILROAD EMPLOYÉES.

One hundred killed and one hundred and thirty-six crippled for life between October 19 and November 23, 1889.

Of these forty were killed by brakes and couplers, and nineteen more mutilated. "Falling from trains" comes from being on top of cars to handle brakes. Read the terrible record below.

Bear in mind this is going on all the time, and we do not get over one-half of the facts. While the fatal link and pin and hand-brake were doing their terrible work of death, the ordinary accidents in railroad work killed sixty others and injured one hundred and seventeen more.

But our present business is with the old common link and pin coupler and hand-brakes, for their deadly work can be stopped.

Here is their work. Read:

[Railway Age, November 1, 1889.]

W. O. Hopkins, fireman Nashville, Chattanooga and St. Louis, was thrown from the top of a train at McEwen, Tenn., October 19, and was mangled to death beneath the wheels.

T. F. Higgins, brakeman Missouri Pacific, fell from a moving freight-train near Leavenworth, Kans., October 20, and was run over and killed.

F. M. Crosby, switchman Central of Georgia, fell under a train while switching cars at Savannah, Ga., October 20, and had one leg crushed.

John O'Neil, brakeman Pennsylvania Railroad, was thrown from a freight-train and instantly killed near Beatty's, Pa., October 21.

William Dowe, brakeman Mobile and Ohio, fell on the track while coupling cars at Whistler, Ala., October 22, and was run over and killed.

M. J. Whitworth, brakeman Nashville, Chattanooga and St. Louis, fell between the cars at Murfreesborough, Tenn., October 22, and was run over and had both legs crushed.

C. E. White, brakeman Chicago and Alton, fell between the cars at Higginsville, Mo., October 23, and was run over and instantly killed.

G. T. Ragan, a brakeman, was run over and killed while coupling cars at Monticello, Ill., October 26.

James Crow, brakeman Wabash Railroad, fell from a train at Galesville, Ill., October 26, and broke his leg.

Frank Dubois, brakeman Southern Pacific, was probably fatally crushed between the bumpers while coupling cars at Oakland, Cal., October 19.

M. F. O'Mally, brakeman Chicago, Milwaukee and St. Paul, was struck by a bridge near Tomah, Wis., October 25, and was instantly killed.

Nicholas Haley, a switchman, was run over and killed by the cars at Quincy, Ill., October 25.

James Swift, brakeman Louisville and Nashville, fell from a car near Gracey's, Ky., October 24, and was badly hurt.

Frank McPhee, switchman Burlington and Missouri River, had his back seriously injured while switching cars at Alliance, Nebr., recently.

William Norman, brakeman Northern Pacific, fell from a freight-train near Helena, Mont., October 22, and was killed.

D. W. DuPuio, brakeman Montana Central, was precipitated from the top of a freight-train by the giving way of the brake-chain near Gallatin, Mont., October 23, and was fatally injured. He died several hours after being removed to the hospital.

Charles White, brakeman Northern Pacific, was seriously injured by falling from a freight-car at Helena, Mont., October 23.

Dennis Welsh, flagman Little Miami, was seriously injured by being struck by an engine at Columbus, Ohio, October 24.

Levi Ronco, switchman Northern Pacific, was run over by the cars and had his arm taken off at Dickinson, Dak., October 22.

James Gunn, switchman Chicago, Rock Island and Pacific, caught his foot in a frog while switching cars at Armourdale, Kans., October 22, and was run over and instantly killed.

Charles Smock, brakeman Denver, Texas and Fort Worth, met with a painful accident while coupling cars at Colorado Springs, Colo., October 25. A piece of metal flew off the timber and struck him in the right eye, completely destroying the sight.

[Railway Age, November 8, 1889.]

W. B. Bowlin, brakeman Nashville, Chattanooga and St. Louis, fell under a train while switching cars near Decherd, Tenn., October 23, and had one leg taken off.

A brakeman named Davis, on the Kansas City, Wyandotte and Northwestern, was run over by the cars at Seneca, Kans., October 17, and had one leg severed.

Isaac Dick, brakeman Pennsylvania Railroad, had a leg crushed by being run over by a freight-train at Greensburg, Pa., October 28.

Michael Fox, brakeman Cleveland, Cincinnati, Chicago and St. Louis, was thrown from the top of a freight-train by the breaking of a coupling near Cincinnati, Ohio, October 29, and was seriously injured.

Ira Reed, flagman Baltimore and Ohio, was run over and killed by a train at Columbus, Ohio, October 29.

Frank Walker, brakeman Central of Georgia, died October 30 from injuries received a couple of weeks before by being run over by a freight-train.

George P. Berry, freight brakeman San Antonio and Aransas Pass, was crushed to death between the cars at Muldoon, Tex., November 1.

Clarence Wainwright, brakeman Pennsylvania Railroad, was run over and instantly killed by a train at Philadelphia, Pa., November 1.

Patrick O'Donnell, brakeman Louisville and Nashville, had his right hand crushed while coupling cars at Mobile, Ala., October 31.

William G. Wadding, brakeman New York, Lake Erie and Western, fell from his train near Otisville, N. Y., October 26, and was killed.

William Wilson, brakeman Louisville and Nashville, was run over and killed while coupling cars near Columbia, Tenn., November 2.

[Railway Age, November 15, 1889.]

Andrew Schwilick, baggage-master Philadelphia and Reading, caught his foot in a frog at Pottsville, Pa., October 28, and his foot cut off by a freight-train.

Richard Hathaway, a brakeman, was run over and killed while coupling cars near Lyons, N. Y., November 6.

James Peterson, of the Milwaukee and Northern, at Iron River, Mich., was run over by a switch engine November 6, and received injuries from which he died the next day.

Charles W. Farnham, freight conductor Montana Central, fell from his train near Clancey, Mont., November 5, and was run over and so seriously injured that he died later in the day.

Thomas Kitchen, switchman on the New York Central, was run over and killed while switching cars at Suspension Bridge, N. Y., November 7.

[Railway Age, November 22, 1889.]

William Kelly, conductor Grand Trunk, was killed by a freight train at Trenton, Ontario, November 11.

Charles Bullock, brakeman Baltimore and Ohio, was run over by a freight-train near Newark, Ohio, November 11, and had both legs cut off. He died after being removed to his home.

Martin Kelly, brakeman New York Central, had his hand crushed while coupling cars at Fairmount, N. Y., November 7.

Peter McShane, watchman Lehigh Valley, was run over and instantly killed by a train at Philipsburgh, N. J., November 12.

Wesley Osgood, a brakeman, fell from the top of a freight train near Tama, Iowa, November 16, and was run over and killed.

George Humphrey, brakeman, New York, Susquehanna and Western, caught his foot in a frog while coupling cars at Paterson, N. J., November 16, and was run over and killed.

George Newsbaum, brakeman Chesapeake and Ohio, was run over and killed by a train at Huntington, W. Va., November 17.

Fred Stearn, brakeman Chicago, Milwaukee and St. Paul, fell from a work-train at La Crosse, Wis., November 18, and was run over and killed.

Thomas Floyd, brakeman Chicago, Milwaukee and St. Paul, was crushed to death between the cars at Austin, Minn., November 15.

[Railway Age, November 29, 1889.]

M. Wallihan, brakeman Northern Pacific, was killed by the cars in Montana, November 19.

Charles Knox, brakeman Hannibal and St. Joseph, fell from a freight-train near Chillicothe, Mo., November 18, and was killed.

Frank Redmond, a brakeman, was crushed to death by the cars in the Edgar Thomson Steel Works yards at Pittsburgh, Pa., November 18.

George Pamphrey, brakeman New York, Susquehanna and Western, caught his foot in a frog while coupling cars at Paterson, N. J., November 16, and was run over and killed.

A conductor named Mulehand, on the Northern Pacific, was run over and fatally injured while coupling cars near Bozeman, Mont., November 16. His left arm and leg were badly crushed, but he died before they could be amputated.

William Nichols, brakeman New York and New England, was seriously injured about his head, being caught between two cars at Providence, R. I., November 18.

McGlynn Tarbet, brakeman Pittsburgh, Cincinnati and St. Louis, was slightly injured by being caught between the bumpers while coupling cars at Columbus, Ohio, November 21.

P. H. Newkirk, freight brakeman Pittsburgh Fort Wayne and Chicago, fell on the track while coupling cars at Londonville, Ohio, November 21, and was run over and had both legs cut off.

F. B. Morse, brakeman New York Lake Erie and Western, fell from a train near Monroe, N. Y., and was instantly killed.

John Coleman, switchman New York, Lake Erie and Western, had one finger crushed while coupling cars at Port Jervis, N. Y., November 16.

Bert Gore, brakeman Ohio, Indiana and Western, fell from a freight-train as it was crossing the bridge over the Wabash River at Covington, Ind., November 22, and was drowned.

C. A. Falley, freight conductor, Texas and Pacific, fell from his train near Marshall, Tex., November 21, and was run over and killed.

On the same day, near Emigsville, Pa., a freight brakeman, named Johnson, fell between the cars and was run over and killed.

J. A. Boley, a freight brakeman, was fatally injured while coupling cars at Huntington, W. Va., November 22, and died several hours later.

W. T. Read, a brakeman, fell from a freight train Jefferson, Tex., November 22, and was run over and instantly killed.

Daniel Dugan, switchman, Wabash road, was run over and instantly killed while switching cars at Kansas City, Mo., November 23.

L. S. COFFIN,
Fort Dodge, Iowa.

Mr. COFFIN. I have given the dates, the railroads, and the names of the persons injured. And that does not embrace more than one-half. We do not get it all. Now, the bill that I have referred to—and I suppose it is understood that I drew it up—

The CHAIRMAN. If you will allow me, is not that bill the law in your State?

Mr. COFFIN. It was passed by our State substantially as this. I want to say in regard to my State—I am better known there than I am to you; my work is known—I want to say that in the senate of the State of Iowa not a single vote was given against this measure—not a single vote. Now I want to ask you to allow me to be apparently a little egotistical, because I must be in order to show you why I think I have some information that would be of value to you.

When I first went on the Iowa commission it was the rule of our commission to investigate any serious accidents on railroads and to report to the governor. It had not been their custom to investigate when a railroad man was killed. They thought it was a necessity somehow, that it occurred as a matter of course, that some men had to be killed. But the reports of the killing of men came in so rapidly that I began to feel as though I must investigate it. I began to feel that I could not meet my obligations unless I did. So as soon as I heard that a man was killed I went right to the place and investigated it. I then began to go to the managers of the roads, and to talk with experts and see if there was not something that could be done.

The master car-builders appointed a committee to take hold of a series of experiments to test the practicability of automatic couplers and power-brakes; and unless you gentlemen are familiar and understand

perfectly well what the Master Car-Builders' Association is I will tell you.

As the railroads began to expand in this country and they began to have joint arrangements and the cars went from one road to other roads, it was found necessary, as the number of cars grew, to have arrangements by which the different roads would have repairs, you may say, so that a car that was broken down on a foreign road could be repaired and go on its journey. So they organized what is called the Master Mechanics' or the Master Car-Builders' Association, which is an important service in railroad circles. They meet together every year in annual convention and discuss this matter of the interchange and repair of cars.

This association, which is some twenty-eight years old, has its annual convention, and represents in that association some 90 per cent. of all the railroads of the country. They may be called, as Judge Cooley says, a confederation of car-shops. They meet together to discuss this important point of having couplers, brakes, and other appliances of a standard character.

From 1880 to 1882, 1883, and 1884 this question of couplers agitated them, and it was a matter of a great deal of interest and discussion.

When the Miller platform, which is universally used on passenger-trains, went into use then they commenced the discussion of a coupling for freight-cars. That has been under discussion for a long while. In 1884, at their convention in Saratoga, by a large majority of votes, they decided that the true mechanical principle of a freight-car coupler was similar to the passenger-car coupler—a vertical hook coupler—as you have seen many a time on a passenger-car. It could not be like that exactly because of the platform, which was not practicable in freight-cars.

In 1884 they appointed a committee to meet and investigate this matter of couplers, and in the fall of 1885 an advertisement was sent out all over that any party who had a coupler which he wanted to bring before the notice of the railroads should fit up two cars with the coupler and have them present at Buffalo so that the experts could test them.

I was at that test, and a great many kinds of couplers came. They tested those couplers in every conceivable way that they could and would be in actual service.

The committee that had charge of that voted that twelve of those couplers were apparently practicable, and they were voted upon to be kept for future experiments and future service and consideration.

The committee again made a report after that meeting. Their next report was made at Minneapolis in 1887. I was also there and heard that report.

That report decided that the Janney type of coupler, of this vertical plate type, was the practicable coupler. That was decided by a two-thirds vote of the association.

They adopted the report of that committee advising the adoption of the Janney type—not the Janney coupler, but the Janney type of coupler. Then—and this is one of the important things that I want you gentlemen to keep in mind—by a rule of that association, any important action of that body relative to adopting a standard has to be submitted to the companies they represent, and if after ninety days of consideration the management of the company sends back a letter ballot approving the action of the master car-builders in adopting a certain standard, then that becomes a standard for all the railroads in

this nation, or at least those represented in that association, which is nearly 90 per cent.

That action was taken, and in October the managers returned a letter ballot with over a two-thirds vote corroborating the action of their master car-builders. The executive committee were authorized to select a coupler that suited them of this type, change it to suit, and draft the lines of it, make specifications, and then advertise to the world that any couplers of this type, vertical plane hook type, that would automatically couple with the one they selected, and could be coupled with a link and pin coupler, should be considered the standard and all the railroads could use it. There are to-day ten to fifteen of those types of couplers, which are now being used by the railroads.

Now right here let me say in passing in regard to your bill, Mr. Chairman, and the Massachusetts bill, which provides for a committee of experts to select a coupler, this work has already been done by far better men than you can possibly have it done by any committee that can be created, because these railroad experts have been trying for years; they were perfectly disinterested, had no interest whatever in any of these coupler companies, and by these years of tests and all like that they have decided which is the practicable one and now the companies are buying them and putting them on pretty largely.

You will see that the New York Central here the other day made a contract for two different couplers of the same type, six or eight thousand of each. One is called the Gould. I do not recollect the other. The C., B. and Q. made a contract for fourteen thousand of these couplers. Mr. Hughitt, of the Northwestern, told me that they would give a large order for them right away and put them on all their cars.

So that this work that you contemplate in your bill for the Commission to do has already been done, in my mind, much better than can be possibly done by any commission you may create.

Now in regard to the brakes. The same thing almost has been gone through with by these master car-builders in regard to ascertaining the advisability or practicability of applying power-brakes to freight-cars. It is well known as a matter of history that the test at Burlington in 1886 and 1887 was the most remarkable event in railroad history ever had in this nation. There for weeks the experts were there; and let me give you the particulars. Every man who had a brake which he wanted to sell to railroad companies was requested to come to Burlington with fifty cars equipped with his brake.

Senator REAGAN. Before you pass away, is this coupler which was agreed upon by the Master Car-Builders' Association a patented article?

Mr. COFFIN. Yes, sir. And I want to say that Mr. Janney released by writing to the master car-builders a certain patent which he had on these lines. He released it to them, and now it becomes public property, that part of it. There are other little combinations in other couplers which are patented.

Senator HARRIS. Do I understand you to mean that the coupler agreed upon by the master car-builders is now free from royalty; free from patent altogether?

Mr. COFFIN. Not altogether. The locking device has a patent upon it. It is quite an old coupler; it has been in use.

Senator HARRIS. Is that Janney's patent?

Mr. COFFIN. Yes, sir, but he released those particular lines which the master car-builders wanted, so that there would be competition among other builders for the same type.

The CHAIRMAN. Have you any idea what it is costing the railroads to purchase these couplers?

Mr. COFFIN. It costs from \$12 to \$25 a car, depending on which patent they buy. Some are cheaper than the others. But the highest is \$25.

Senator BLAIR. None of these couplers have patents, have they?

Mr. COFFIN. Oh, yes, sir.

Senator PLATT. What do you mean by \$25; for the right of using?

Senator WILSON. Including the right.

Senator PLATT. Equipping the car?

Mr. COFFIN. Yes, sir.

Senator BLAIR. Both ends?

Mr. COFFIN. Yes, sir.

At the hearing before the House committee the committee asked me if I could not furnish them a model so that they could see what these couplers were. I told them that there were couplers at the Interstate Commerce Commission. I have now two models here which I can explain to you.

The CHAIRMAN. I think it better that you conclude your statement first.

Mr. COFFIN. All right.

Senator BLAIR. All the couplers have a patent upon them.

Mr. COFFIN. Yes, sir; all do.

I was on the point of the brake business. The conditions of the test were that each man should come there with fifty cars equipped with his brake and put them in the hands of the experts, and they would put them through all the motions required in actual service.

Senator BLAIR. You are speaking of brakes now.

Mr. COFFIN. Yes, sir. There were some six different kinds of brakes brought there. I do not want to detain you in recounting the terrible work that we had there in those experiments, in making what is called emergency stops, and all like that. They wanted a brake that the engineer could apply instantly when danger showed itself and still apply it so as not to wreck the cars of his train by the terrible shocks that are occasioned by the stopping of the train suddenly.

The first year it was almost a failure of all the brakes.

The CHAIRMAN. You speak of a terrible time you had; was anybody killed in the contest?

Mr. COFFIN. It is almost a miracle that we were not.

Senator BARBOUR. I suppose it was terrible on the cars.

Mr. COFFIN. Yes, sir. Strongly built cars were mashed into kindling-wood there by the score, and the car that I rode in all the time there, every little while they would make such a stop that the center pin that held the car to the trucks would be shaved off like a tallow candle. The only way we could do was to have a common box-car, and spread cushions on the floor. And even then we would be piled up in one end of the car nearly every time they made a stop.

The CHAIRMAN. What business had you there?

Mr. COFFIN. I was commissioner from Iowa, and I saw these men being killed, and I wanted to know if there was not a remedy. I felt that I must do it. They invited the commissioners of the different States to be there. Several came, but one ride down that course satisfied them, and they left, every one of them. [Laughter.] The railroad boys will corroborate me so far as that is concerned.

Senator WILSON. The Iowa commissioner remained at his work.

Mr. COFFIN. I felt as though I must.

Senator BLAIR. Oh, he was born in New Hampshire.

Mr. COFFIN. None of the brakes in emergency stops was found to be suitable and practicable to freight service to make it safe. The test was over, and it was advertised to the world that they would repeat it the next year, in 1887.

I went there again on invitation of the expert to the 1887 test. Only three brakes came that time.

What we call the buffer brakes were entirely knocked out the first year. Those were the ones that gave us the most danger. The next year there were all air-brakes. The only brake which came that year which was at all practicable was a brake that came from Germany. It was a Westinghouse brake to all intents and purposes, but its valves operated by electricity with a little dynamo on the engine, which enabled the engineer to apply the brake to the last car of a train of fifty cars just as quickly as to the first car. That prevented the terrible shock. You will understand that in the first place applying a brake to a long train the brake set on the first car going, say, 40 miles an hour (the ordinary slack of couplers in a train of fifty cars is nearly 18 feet in all), it leaves the last car to come up 18 feet at the rate of 40 miles an hour after the brake has been applied to the first car. The German brake applied it to the last car just as soon as to the first, and the stops were made just as smoothly as in a palace car. They hurled that train down that grade of 53 feet per mile at the rate of 40 miles an hour and when the signal was given they stopped the train inside of 500 feet without a particle of damage or anything of the kind.

The CHAIRMAN. I thought you said the Westinghouse brake and the German brake were the same.

Mr. COFFIN. The air part was the same. Mr. Carpenter invented a plan so as to apply electricity, so that the valves were operated by electricity.

Senator BARBOUR. It is patented in this country.

Mr. COFFIN. It is not in use here.

We went away from there feeling greatly discouraged that we could not get men off the top of the cars very soon, because managers of roads would be very slow to adopt a brake that had all the complications of electricity to it, necessitating having electricians with every train.

I quote from the report of that committee to the organization of the master mechanics, which will be interesting to you.

In our report to the convention last year the main conclusion that we arrived at was that the best type of brake for freight service was one operated by air in which the valves were actuated by electricity. Since that time your committee has not made any further trial of brakes, but the aspect of the question has been much changed by the remarkable results achieved in non-official trials which have taken place in various parts of the country, and have been witnessed by many members of this association. These trials show that there is now a brake in the market which can be relied on as efficient in any condition of freight service.

The present position of the freight-train brake is, briefly, as follows:

First. Brakes can be, practically speaking, simultaneously applied without electricity throughout a train of fifty freight cars.

Second. Other inventors are working at the problem of making an air-brake which will be rapid in action and suitable for service on freight trains. We also understand that inventors are working at buffer and electric friction brakes, but we have no reason to hope that brakes on these principles can successfully compete with air-brakes. In view of these conditions your committee does not recommend the adoption of any particular brake, but considers that a freight-train brake should fulfill the following conditions:

First. It shall work with air of 70 pounds pressure. A reduction of 8 pounds shall set the brakes lightly, and a restoration of pressure shall release the brakes.

Second. It shall work without shock on a train of fifty cars.

Third. It shall stop a train of fifty empty freight-cars when running at 20 miles per hour, within 200 feet on a level.

Fourth. When tried on a train of fifty cars, it shall maintain an even speed of 15 miles per hour down a grade of 53 feet per mile without variation of more than 5 miles per hour above or below that speed at any time during the descent.

Fifth. The brake shall be capable of being applied, released, and graduated on the whole train by the engine, or without any assistance from the brakemen or conductor.

Sixth. The hose-coupling shall couple with the present Westinghouse coupling.

We recommend that all freight-cars fitted with such a brake shall be marked "air brakes" on each side of the car, near the top. The committee further recommends the use of iron or steel brake-beams, and that the subject of the best form and proportion of brake gear and the selection of a standard solid brake-shoe for use with metallic brake-beams should be intrusted to a committee appointed for the purpose.

G. W. RHODES.
GEO. HACKNEY.
JOHN S. LENTZ.
D. H. NEALE.

The present position of the freight-train brake is briefly as follows: As brakes must be, practically speaking, simultaneously applied without electricity throughout a train of fifty cars, other inventors are at work on this problem to make air-brakes.

This is about all that I want to say. I do not want to take up your time to say more in regard to it.

In the fall of 1887, after the tests at Burlington and after the report of the committee at their convention in Minneapolis, I received an invitation from the same experts to come to Burlington to witness another trial. It was not an unofficial trial. This was by the Westinghouse company. There were fifty of those cars, 60,000-pound capacity cars, equipped with the improved brake. The action of that brake was the same as the action of the brake of Mr. Carpenter, which was operated by electricity, as far as its results were concerned.

I want to say here, if you will allow me to take the time, we went down that grade at the rate of 40 miles an hour on a train two-fifths of a mile long, and at a signal given that train would be stopped inside of one quarter to one-third of its length without any shock at all. That train went all over this nation, to all the great railroad centers, and on advertised days hundreds and thousands of railroad officials went out to see it and ride on it, and they saw its operation.

Senator HARRIS. Was the brake applied by the engineer?

Mr. COFFIN. Yes, sir; and not a man was on the top of the cars.

Now there are other brakes. I do not want you gentlemen to understand or think that I have any partiality to the Westinghouse brake or any other brake. I have kept myself entirely aloof. I have no prejudice against any brake. There are other brakes that will do the same thing, probably. In the bill which I drew up and which Senator Allison introduced, I carefully avoided everything of that kind which looked toward favoring any particular brake.

The thing is solved; the question is solved; the problem is solved. You ask in your bill, Senator, for these experts to inquire into the subject of applying power-brakes to freight-trains. That has been decided and acknowledged so by the best railroad men in this nation, and to-day they are putting these brakes on rapidly.

I want to say that it does seem to me that the railroad men are the only men who can decide on the practicability of any of these appliances, and they will do it.

Now, you pass a general law asking or requiring that each company shall equip its cars with automatic couplers and with power-brakes under the control of the engineer.

Their own self-interest will lead them to uniformity in this matter.

The labor of the Master Car-Builders' Association is directed to this end, to have uniformity. If the car that goes over the Boston and Albany road to Portland, Oregon, or California breaks down, we want to have supplies there so that it can be repaired and sent home.

Here was a very important point, too. We have passed this law in our State. Our roads, as you know, will have probably half of their cars all the time off in the country and on the New England roads. Our law compels our railroad companies to expend large sums of money to equip their cars. They lose the benefit of that expenditure of money unless we have a national law requiring that all roads which send their cars into our State for use in connection with our companies shall have the same kind of safety appliances.

You see that is a very important point.

The CHAIRMAN. You seem to be familiar with the history of the subject generally. Are there any other States that have adopted legislation on the subject?

Mr. COFFIN. I am very glad you asked me that.

When this question began to be agitated the States of Connecticut, Massachusetts, New York, and Michigan passed laws similar to the one you were seeking to have passed in your bill, having the commissioner select certain kinds of appliances. They did so and it has added confusion to confusion. It has added danger to danger. None of the States elected the same coupler, hence it makes it very difficult.

The former commissioner of Michigan approved of six different types of couplers, I think. To-day the commissioner has sent out an order withdrawing his approbation from all except the M. C. B. type, that is the Master Car-Builders' type. That is an argument I want to use here against having anybody outside of the railroad circles select any of these appliances. Just pass a general law and the railroads themselves will see to it that they get the practicable ones and the best ones.

Senator WILSON. Require the roads by law to adopt these safety appliances and then leave the particular kinds to be adopted to them.

Mr. COFFIN. Yes, sir.

The CHAIRMAN. In other words, do not specify anything about what kind of an automatic coupler they shall use.

Mr. COFFIN. That is all.

Senator BLAIR. Does the law of the State of Iowa requiring railroads to adopt these safety appliances provide penalties for failing to do so?

Mr. COFFIN. Yes, sir.

Senator BLAIR. Does it provide criminal punishment for failure to obey the law?

Mr. COFFIN. No. It imposes a fine of \$500 and not over \$1,000 and are liable for injuries to trainmen injured by cars in use contrary to the provisions of the laws. The Iowa law requires that all new cars and all repaired cars and all the cars that have to have new draw-bars shall come into use again with automatic couplers.

The CHAIRMAN. Some of these bills, prominently the one from Massachusetts, introduced by Senator Hoar, provide that every time a freight-car or at least when an old freight-car goes into the shop for repairs it shall come out with these automatic couplers, etc. Now, the question which we did not understand exactly was whether an old car repaired, or a new car, with the automatic coupler, can be put into a train with a car which has not the automatic coupler, or whether you would have to make up a train with cars having the automatic coupler, or how that is. Please explain it.

Mr. COFFIN. Bear in mind what I have said in regard to the speci-

cations made by the Master Car-Builders, "any coupler that would automatically couple with M. C. B. couplers" (they call it that) "and could be coupled by hand to the old draw-bar." That is one of the specifications. It must be capable of being coupled by hand to the old draw-bar.

Senator BLAIR. The old method?

Mr. COFFIN. Yes, sir.

The CHAIRMAN. So that the automatic coupler could be coupled with an old car having the link and pin coupling.

Mr. COFFIN. Yes, sir. I have the models here. I was afraid to bring them up first, because you might think I had some interest in some coupler, which of course I have not. [Mr. Coffin here produced two models.] Here is one of the many kinds of couplers. [Indicating.] It is made to go together this way. [Exhibiting.] Now it is locked fast. No man has to go in there to lock it. Here is the place for the link [indicating] and here is the place for the pin [indicating], so that it can be fastened with a common link and draw-bar.

Senator HARRIS. How do you unlock it?

Mr. COFFIN. Here [indicating] is a little chain that goes up to the car.

Senator HARRIS. You have a little chain with a crank out here [indicating] so that it can be uncoupled.

The CHAIRMAN. So that the men do not have to go between the cars?

Mr. COFFIN. They do not have to go between them.

The CHAIRMAN. The ordinary pin can go in there [indicating].

Mr. COFFIN. There is the place for the link [indicating].

Here is another one [exhibiting model], only it is a different make. I think there are some twelve of these.

Senator BARBOUR. That is very much like the Janney coupler.

Mr. COFFIN. Yes, sir. A novice could not tell the difference between them.

Here is the third deputy auditor [pointing to Mr. Shaw]. He was handling these couplers all the time. He was a brakeman and yardman at Indianapolis.

Senator HARRIS. Are these the kind that cost from \$12 to \$25 to equip a car?

Mr. COFFIN. Yes, sir.

Senator BLAIR. It only costs that to equip an old car that way?

Mr. COFFIN. That is all.

Senator BLAIR. How much does a car cost?

Mr. COFFIN. From three to five hundred dollars.

Senator BLAIR. Why should not the law require old cars to be equipped immediately with the automatic coupler?

Mr. COFFIN. This bill which I wish you to pass requires that all new cars and all old cars going in the shop for general repairs shall come into use again with these automatic couplers. Then after January 1, 1895, all cars entering into interstate commerce must be equipped with automatic couplers.

Senator BLAIR. Why wait five years?

Mr. COFFIN. Because it will be almost impossible probably to have these manufactured in time enough for the railroads to equip their cars. It will take a good deal of time.

Senator BLAIR. Do you know how many cars there are in this country?

Mr. COFFIN. A little more than a million of freight-cars.

Senator BARBOUR. I do not see any necessity for legislation on this subject. The Southern roads are putting these automatic couplers on

their roads, and is it not better to let the thing to the railroads themselves?

The CHAIRMAN. It is a question whether they will be put on before half of the employes are killed off.

Senator BLAIR. And some roads will not put them on at all.

Mr. COFFIN. Here is a point which I wish to impress upon you very strongly. It is more dangerous to couple this coupler to a common old link and pin draw bar than to use the two links and pins. The boys are used to the old ones, and they are not used to these. I want this transition state to pass as rapidly as possible.

The CHAIRMAN. Do you think it a good thing to require all cars which have a little repairs upon them to come out of the shop with automatic couplers on them?

Mr. COFFIN. I should say "which go to the shop for general repairs."

Senator BLAIR. How long do these cars last?

Mr. COFFIN. The average life of a car is about six or seven years.

Senator BLAIR. Some less and some more?

Mr. COFFIN. Yes, sir.

Senator HARRIS. If that automatic coupler or an automatic coupler shall be adopted and the air-brake, worked by the engineer, shall be adopted, will they not diminish the number of brakemen necessary to a train?

Mr. COFFIN. No, sir; not one particle. They have to have those men in order to attend to the switches and to make up the trains and to change at the station; they have to have them anyhow.

Senator HARRIS. It would not diminish the crew at all?

Mr. COFFIN. No, sir; it only takes them out of the dangerous position that they have to occupy now.

Senator HISCOCK. Have you any statistics to furnish to the committee of accidents to persons?

The CHAIRMAN. Mr. Coffin has already furnished them. I beg leave to say, also, that in the report of the Interstate Commerce Commission all the statistics which are necessary are given, in order to convince anybody that it is necessary to adopt some safety appliances.

Senator BARBOUR. There will always be some accidents, no matter what kind of a brake you use.

Mr. COFFIN. More or less. Let me say a word further against your bill, governor.

The CHAIRMAN. That is right.

Mr. COFFIN. All of you, I know, want just the same thing I do. Whichever will reach it the quickest will suit you best. As I had shown you before Mr. Hiscock came in, at the very least there are seven thousand of these boys injured or killed in handling these old couplers and the hand brakes every year. Now, at the very best, Mr. Chairman, you could not get your law into operation and decide which is the best coupler and get to work inside of a year; you can not in two years—you can not do it. Now, for the sake of having that commission, is it worth while to sacrifice 15,000 of these young men?

Senator HISCOCK. Let me point your mind to the discussion of this question whether in the past, and probably in the present, the liability of all carrying companies, and in fact of all people who are using machinery of any kind to furnish their employes with good, safe machinery for operation—in respect to passengers, of course, the rule is a little different—is not a sufficient incentive for railroad companies to adopt all these things in the ordinary course of their business? Now connecting that with another principle that is involved, that if you set out and

say what sort of machinery shall be used, that then you discharge the railroad corporation from any liability, if it does use it, for it is used in connection with the law, and then instead of the railroads acting under the necessity of doing this for self-preservation they back themselves up against the law and say, "We have complied with the law on this subject"—now the question is whether it is not dangerous, therefore, to enter upon this system of saying what machinery shall be used and what new inventions shall be applied.

Mr. COFFIN. I thank you that you have made that argument. I want to use it.

Senator HISCOCK. You describe a certain kind of coupler?

Mr. COFFIN. No, sir.

Senator HISCOCK. Yes, it is an automatic coupler, adopted upon the theory that there can be no improvement made upon it.

Senator BLAIR. Automatic is a thing that works itself.

Senator HISCOCK. I understand that. You are proceeding upon the theory that there can be no improvement.

Mr. COFFIN. I think that is an impossible conception.

Senator HISCOCK. You are acting upon the theory that invention has reached its limit. Whenever you start out to define a particular contrivance or machine or a plan that shall be used to do a specific work—

Mr. COFFIN. The bill does not specify any particular coupler.

Senator HISCOCK. Well, that is the point. I merely suggested to you.

Mr. COFFIN. The bill specifies that the railroad shall adopt some sort of automatic couplers that will not require the men to go in between the cars to couple. Now you go on with the invention as much as you please. All we want to do is to keep the men out from between the cars. Make better ones if you can; these are self-acting. All we ask, no matter how great an invention you have, is that they shall couple themselves without danger to the men.

I hope the committee will give me a little more time. That is just what I arranged in the bill, that the responsibility shall be on the railroads. The moment that you define, as the Senator says, what they shall put on, then you relieve them of the responsibility, and they will adopt something so as to fill the letter of the law. The superintendent of one of the roads in Connecticut threw a coupler on a desk and said: "I am going to put that coupler on," and was swearing about it. "That will comply with the law. It will be broken all to pieces in ten days, I expect."

I do not want the responsibility to be upon this committee or upon Congress to decide what kind of a coupler or brake the railroads shall use. But I want to leave it to the railroads to say. They must adopt something.

Senator REAGAN. How would you get the concurrent action of the railroads?

Mr. COFFIN. Their own self-interest will do it.

Senator HISCOCK. Will not their own self-interest lead them to apply these appliances as quickly as they can?

Mr. COFFIN. No, sir. I drew the seventh section of this bill with an idea to that point, of having uniformity. I say that when any railroad company shall have equipped its cars, its rolling stock, with such appliances, it may refuse, prior to the date fixed in this bill, to receive a car coming from a connecting line that is not equipped with such appliances as to work with its own. That will lead to uniformity.

But the self-interest of the railroad. Before the gentleman came in, when I was dwelling on the action of the Master Car-Builders, I said that what they wanted to get at was uniformity. They have adopted this. They have had two conventions since, and not a man has ever moved to change at all, and, as I said before, the railroads are now putting them on by thousands. Now the roads are putting on these couplers. I want this law passed so that the roads which have put them on shall have the benefit of their large expenditures.

Senator HARRIS. In regard to the air-brakes which you wish the railroads to be required to use, about what will it cost the railroads to equip a car with them?

Mr. COFFIN. Now, there is the Loughridge brake, made at Philadelphia; the Boyden, at Baltimore; the Westinghouse brakes, made at Pittsburgh, and another brake or two made at other places. The prices range, I think, from \$20 to \$45.

The CHAIRMAN. For the brakes?

Mr. COFFIN. Yes, sir. I think the Westinghouse brake is \$45. I think the Loughridge brake is \$35, which is made in Philadelphia.

Senator REAGAN. Will these brakes always work?

Senator PLATT. Yes, that is the question; will they always work?

Mr. COFFIN. It is an impossibility for them not to work, except there is some mechanical matter which gets out of order.

Senator BLAIR. Will these different brakes which the Master Car-Builders' Association agreed upon work together in the same train?

Mr. COFFIN. Yes, sir. That is one of the specifications of couplers, uniformity. The Westinghouse, the Loughridge, and the Boyden brakes interchange.

Senator PLATT. Is it not true that if you get a train equipped with these automatic brakes that sometimes they do not work, and then the train is worse off than if they were without them?

Mr. COFFIN. I do not think that it is so, because every car has a hand-brake on it anyhow.

Senator PLATT. I asked the question because, on coming from California this fall, a train equipped with automatic brakes on the Union Pacific Railroad crashed into another train at the station and killed both engineers and three or four men, and the statement that was made at the time, when we got out to look at the wreck, was that the automatic brakes did not work.

Senator BARBOUR. There was an accident only recently in Staunton, and two or three people were killed, and they lost control of the train entirely.

Mr. COFFIN. Here is a gentleman [pointing to Mr. Shaw] who hauled cars for twenty years.

Senator WILSON. The most careful man in the world may meet with an accident some time.

Mr. COFFIN. Just as sure as air will rush into a vacuum, just so sure will the break work, unless there is some mechanical intervention which will prevent it.

Before I sit down allow me to urge, for the sake of humanity, quick and early action in this matter. As I said before, at least twenty persons a day are being sacrificed by these two things in this nation. I do think, Mr. Chairman, that if this Congress were not in session and the President of the United States realized what this is, as I do, that he would be justified in calling an extra session to pass just such a law as this to stop this terrible loss of life and limb. Hence I want to urge upon you to act at once upon this bill. I do hope it will be enacted

into law inside of a week. I do not suppose I can reasonably hope so, but I would like to have it passed inside of a week. You have passed a bill for the sufferers in the Mississippi Valley. Here are men killed. Here are mothers losing their only help, or young widows losing their husbands constantly, and I may say needlessly. There is no question about it. I know it. I have been through all these things on purpose to learn it, and the only remedy is quick action by Congress or by the States. That is the only remedy, and I do most earnestly urge that there will be quick action.

The CHAIRMAN. Your statement has been made very interesting to me, and I have no doubt to all of the committee.

Mr. COFFIN. This gentleman [Mr. Shaw] will probably corroborate everything I have said in regard to this matter.

STATEMENT OF MR. A. D. SHAW.

The CHAIRMAN. Where do you reside?

Mr. SHAW. Indianapolis, Ind.; that is, I did reside there until about the 20th day of last November. After putting in about twenty-five years as a brakeman and yardman, I came on here to take a position in the Government service. I am ready to answer any questions that you gentlemen may see fit to put to me.

I might go on to state a great many things to corroborate what Mr. Coffin has said. I know the dangers of the draw-bars which are in use at the present time, which are not self-couplers, and I know the dangers which a brakeman has to go through in going over a road in attempting to set brakes. I could just give a description of it in this manner. Say, for instance, it is a bad night—what we call a bad night on the road—sleeting, raining, snowing, etc. We hear the call for “down brakes.” Of course we can not always be on top of the train. During cold weather we go into the caboose occasionally to warm ourselves. We are called out by a signal from the engineer—a whistle for “down brakes.” We get out on top of the train. We find that the tops of the cars are completely covered with sleet. In attempting to get at those brakes a great many of the brakemen lose their lives, slip off the cars, and, again, even if they do reach the brakes, it is more often the case than it is not that they find that the brakes are frozen up, and they can not twist them. That again occasions danger. They can not set the brakes at all; can not set the dog; can not twist the brake. What we call the dog is the little piece of iron which catches on to the ratchet-wheel. As no brakes are set, all will depend on the engineer to stop the train, and if the train was going with any speed it would take some time to stop it.

In making couplings in a yard or on the road a man can not do it with the common draw-bar that is mostly in use at the present time without going in between the cars, and if he wants to in any ways put himself on the safe side, he has to put one foot inside the rail and the other outside. The consequence is that he runs more than one risk when he steps in between the cars. There is a brake-beam, of course, on all cars. That comes even with a man's ankle. The least stumble he might make fixes him. This brake-beam would catch him and throw him down. That is one of the dangers.

The other is when he has to make a coupling between draw-bars, which are unsafe; what we call unsafe draw-bars are on such cars as Empire line and Union line, and great many other cars that are in use on roads in Indiana and Pennsylvania and the Eastern States.

They have a large, flat, iron-face dead-wood. They are about 1 foot in breadth and length. A dead-wood, you understand, is something that protects the cars from coming together. The draw-bars are between the dead woods. Therefore, to get to the draw-bar you have to place your hand either over the top of this dead-wood or underneath or right in there quick and set your link in and pull your hand out. That is the other danger they have to pass through.

The railroad companies, a great many of them, have issued what is called the book of rules, and one of the rules they have asked the men to comply with is to use a stick always in making a coupling. I want to say just this in reference to that, that a railroad man wants the free use of himself. He has all he can do to take care of himself without carrying a club besides. You can go into any yard at the present time and you will not find ten in ten thousand using the stick. It is simply dangerous. The idea of a man using a stick to reach in 4 or 5 feet and try to hold a link weighing from 5 to 7 pounds, with a stick 2 or 3 feet long trying to make a coupling. They can not do it. When I say they can not do it, I mean they can not do it and make the coupling without more risk than without the stick. Sometimes the boys hide the sticks. Where the railroads insist on the enforcement of the rule the boys will hide the sticks under their coats. They run a greater risk in attempting to make a coupling with a stick than with their hands. I base my opinion on my practical experience.

The CHAIRMAN. They do not want to use the stick because they are more dangerous than coupling in the ordinary way?

Mr. SHAW. Yes, sir; that is it.

Senator BLAIR. Why is a rule like that insisted upon after experience demonstrates that it increases rather than lessens the danger?

Mr. SHAW. It seems as though they insist on the boys using them so as to protect the company against law-suits.

Senator BLAIR. It looks to an outsider as though it were a means adopted to protect. But they know it increases the danger?

Mr. SHAW. Yes, sir; but, as I say, they do not insist upon it. For twenty-five years I was in the yard, and I never carried a stick, and they never insisted upon it.

Senator BLAIR. It would appear to a jury as though that was a careful thing to require?

Mr. SHAW. Yes, sir.

Senator BARBOUR. Were you ever hurt?

Mr. SHAW. I had this elbow injured; I had this finger [indicating] taken off, and I have been mashed between cars.

Senator BLAIR. I had a friend pressed up to within not more than 2 inches. He lived, but he was a great while getting well.

Senator BARBOUR. I think as a rule brakemen are very reckless of danger. They get careless.

Mr. SHAW. If they do not become reckless, if they are not swift switchers, the railroads do not need them.

Mr. COFFIN. That is the fact.

Senator BLAIR. I expect it is just like being in battle; if a man is not reckless he may as well get out of the business.

Mr. SHAW. I went in to make a shackle between two passenger-cars at Richmond, Ind. Of course there was no such thing as an automatic coupler or an air-brake at that time. Apparently the draw-bars were in good order. There was no dead-wood to protect them. Passenger-trains hardly ever use the dead wood. It seemed as though the followers were broken. The followers are steel or cast iron, as the

case may be. A spring is put in between these followers to protect the draw-bar from pushing back. If they give away there is no protection. In this case the draws were in apparently good order, standing out in their proper place. I thought there was nothing wrong. I supposed, and had a right to suppose, that they were all right. There were inspectors there to attend to that business. I was ordered in to make that shackle, and the consequence was the draw-bars came together and shoved back and I was squeezed as flat as a pancake, almost.

Senator BLAIR. I do not see why the railroad managers are any more to blame than the public. You exact everything to be done for the least possible money.

Mr. SHAW. I got a letter from an old yardman that looks to me like it was written on the side of a box-car. He was speaking about this same matter. He called my attention to it, and said if there was any thing I could do as a railroad man to have this bill passed, to by all means have it done.

The CHAIRMAN. Do you represent some association?

Mr. SHAW. I came here voluntarily. When I heard that Mr. Coffin was in the city I went to see him, as I am very much interested in anything of the kind.

The CHAIRMAN. You have seen the bill Senator Allison introduced. What have you to say in reference to it?

Mr. SHAW. I think it is a good bill; I think it covers the ground.

The CHAIRMAN. What do you know about the adoption of the coupler by associations and railroads?

Mr. SHAW. I believe that I could state truthfully that they all favor it.

The CHAIRMAN. You think that if that bill were passed the railroads would adopt the coupler which the Master Car-Builders' Association recommends as a uniform coupling; whatever coupling was adopted at all that all the railroads would come in and unite in favor of it.

Mr. SHAW. I think so. I do not see why they should object to it. It seems to me it would be to their interest.

The CHAIRMAN. According to Mr. Coffin's statement, a railroad man in Connecticut said he was going to put a certain coupling on because the law required him to put it on when he knew it would be mashed to pieces soon.

Mr. SHAW. I do not understand that the bill specifies any kind of a system of draw-bars to be used, only that they be self-couplers.

Senator BARBOUR. I suppose the chief objection is the cost.

Mr. SHAW. I want to say this, that the cost of these draw-bars would be less in time than any of those now in use, because they are cast iron and a little shock will break them. I refer to the class of draw-bars not self-couplers. These large couplers, we call them the Janney couplers, there are a great many of them in use, on stock trains especially. They are now putting them on stock cars; stock shippers desire it; also the automatic brake, a great many of them too are now in use. I see those that they are putting on are large durable draw-bars. They do not have to stand this shock, and the consequence is that they last a great while.

Senator BLAIR. I suppose a wrecked train would pay for putting on couplers on an entire road.

Mr. SHAW. Indeed it would.

ADDITIONAL STATEMENT OF L. S. COFFIN.

Mr. COFFIN. Let me say one word more.

The CHAIRMAN. Certainly.

Mr. COFFIN. In my experience with wrecks in my State I find that at least 50 per cent. of all the wrecks of railroad freight-trains could be prevented if the engineer could have put his hand on the brake instead of calling for brakes.

Let me call your attention to a wonderful statement made by Mr. Cooley, that only one brakeman in about five has a chance to die a natural death. Those are Mr. Cooley's own words.

Senator BLAIRE. Only one in five?

Mr. COFFIN. Only one in 4.7 has a chance to die a natural death.

Senator REAGAN. You are safer in the Army.

Senator BLAIRE. Certainly, and in time of war, too.

Mr. COFFIN. The superintendent of the Rock Island road said to me the other day, "I would rather my directors would give me eight hundred cars equipped with automatic couplers and brakes than a thousand cars worked in the old way. They would do more work."

I hope, gentlemen, that you will make an expeditious move in this matter. I am doing this for the boys' sake, and at my own expense.

STATEMENT OF D. P. McKEEVER.

The CHAIRMAN. What is your name?

Mr. McKEEVER. Daniel P. McKeever. I am train-master of the Baltimore and Potomac.

The CHAIRMAN. If you have any ideas on the subject or information we would be glad to have it.

Mr. McKEEVER. I do not know that I can say anything in regard to it, but if there are any questions I can answer I will be glad to do so.

The CHAIRMAN. Are you running trains equipped with automatic couplers or in the old-fashioned way?

Mr. McKEEVER. The company has endeavored as far as possible to put modern appliances on all the cars it is building.

Senator BARBOUR. Freight-cars?

Mr. McKEEVER. Yes, sir.

Senator BARBOUR. Of course passenger-cars all have them.

Mr. McKEEVER. Yes, sir.

The CHAIRMAN. What is your judgment as to the importance of putting modern appliances, such as automatic couplers and air-brakes, on freight-cars?

Mr. McKEEVER. So far as they have been used they work very satisfactorily; but I do not know as the thing has been demonstrated as fully yet as it might be, for the reason that in many cases trains are very heavy and the air upon freight-trains—I am speaking of the brakes now—does not work as successfully as it might.

The CHAIRMAN. What has been the trouble?

Mr. McKEEVER. The trouble has been with the use of freight-cars where the weight is more than in passenger-cars, and they have not been able to keep the cars in the service up to the standard passenger-cars for the reason that the freight-cars have rougher usage.

Senator PLATT. So that there is danger that the appliances will not work?

Mr. McKEEVER. Yes, sir; they will not work.

Senator BLAIR. They get out of order?

Mr. McKEEVER. Yes, sir.

Senator BARBOUR. I suppose a freight-car is made more cheaply, and is not as strong?

Mr. McKEEVER. I do not know as the pattern of the freight-car has anything to do with it. It is the equipment, or at least the air appliances, you know, which are not up to the standard. I do not think, myself, that the air is up to the standard that it will work upon a freight-car.

Senator PLATT. If there is a defect anywhere in the appliances it prevents them from working fully?

Mr. McKEEVER. That is it exactly.

Senator WILSON. Does the road with which you are connected operate any freight-trains which are provided throughout with these appliances?

Mr. McKEEVER. They do, sir.

Senator BARBOUR. The Pennsylvania has some.

Mr. McKEEVER. Yes, sir.

The CHAIRMAN. What is your judgment as to the safety of the new and old appliances?

Mr. McKEEVER. So far as I have found personally, I would sooner depend upon a brakeman than upon the air upon a freight-train.

The CHAIRMAN. How about human life; which system is the safer to the men who have to run the train?

Mr. McKEEVER. There is no question about the air-brake being safer. But it is a question I want you to take into consideration, that a wreck might occur upon the air failing and where the brakemen are supposed to rely upon the air taking effect. They depend upon that. And, of course, accidents might happen that way. Now, they are always supposed to be in their places, at least they expect to be ready to apply the brakes when they are called upon. I would prefer to depend upon the hand-brake to-day.

The CHAIRMAN. Do you think fewer men would be injured or killed by the old system than the new?

Mr. McKEEVER. I do.

Senator HARRIS. I understand that you think the old system of applying brakes by hand is more efficient and reliable than the air-brakes?

Mr. McKEEVER. Yes, sir; upon freight trains.

Senator HARRIS. Now, to what extent or to what percentage is it more efficient?

Mr. McKEEVER. That I am unable to state.

Senator HARRIS. Give us your approximate idea.

Mr. McKEEVER. I could not give you that very clearly because I have not looked into it. I do not think the air has gotten down to that point where it can be relied upon for a freight-train. Where men are taught to rely upon the air-brake possibly four or five days in a week and on the sixth day depend upon it to work and not be at their places a wreck might occur wherein there might be more men injured than otherwise.

The CHAIRMAN. When you start out a freight-train with the automatic couplers and air-brakes does the same number of men go along with that train as with a train equipped with the old system?

Mr. McKEEVER. Yes, sir. We have never decreased the number of men.

Senator BLAIR. You have the same facilities of hand-brakes on every train?

Mr. MCKEEVER. Yes, sir; we expect the men to rely upon the hand-brake. We have never used the air-brake entirely upon freight-trains.

Senator WILSON. If anything should happen to an air-brake on a freight-train then the engineer would give the signal for the men to resort to the hand-brake?

Mr. MCKEEVER. Yes, sir.

Senator WILSON. Would it take them any longer on a train which is equipped with air-brakes to get to the hand-brakes than it does on a train which is not supplied with air-brakes?

Mr. MCKEEVER. If they get to rely upon the air brakes the men will not be in their proper places.

Senator WILSON. That is a matter, then, between the employes and the company in respect to their obedience to regulations?

Mr. MCKEEVER. As to their duty.

Senator WILSON. So that the danger which might occur if they are not in their places results from a violation of the regulations of the company.

Mr. MCKEEVER. That would be about it.

Senator WILSON. Would it not be very easy to have those regulations enforced so that the brakemen would understand if they are not in their places at the time the signal is given for them to apply the hand-brake that they would be discharged? Would not that have the desired effect?

Mr. MCKEEVER. There would have to be somebody gunning after them all the time.

Senator BLAIR. You have not mentioned the coupler.

The CHAIRMAN. You use the most modern appliances, or those, for instance, which have been adopted by the Master Car-Builders' Association?

Mr. MCKEEVER. I can not answer that fully, for the reason I do not follow that up.

Senator BARBOUR. Mr. McKeever is connected with the Pennsylvania system of railroads, and they are supposed to be up with the most advanced line—

Mr. MCKEEVER. The Pennsylvania Railroad as a rule adopt all, or at least try to adopt—

Senator BARBOUR. And they led off with the Miller platform and the automatic coupler.

Mr. MCKEEVER. All that is looked after at Altoona.

The CHAIRMAN. You can use the automatic coupler, and that does not necessitate the using of air-brakes, does it?

Mr. MCKEEVER. Oh, no, sir.

The CHAIRMAN. They are separate institutions?

Mr. MCKEEVER. Yes, sir; separate entirely.

Senator HARRIS. Wholly independent of each other?

Mr. MCKEEVER. Yes, sir; independent of each other.

The CHAIRMAN. How about the coupler now?

Mr. MCKEEVER. So far as the coupler is concerned, I have not given that any more than passing thought. The Janney coupler is one we have had in service for a long while. So far as I know of the use of them, between the Janney and the Miller—there is one other coupler which I forget—the Janney is far superior to the others. I can only say that.

Senator HARRIS. The three are automatic?

Mr. McKEEVER. Yes, sir; the Janney has given more satisfaction than the others.

Senator BLAIR. You are referring to passenger-trains?

Mr. McKEEVER. Yes, sir; and freight-trains, too.

Senator BLAIR. Do you use the Miller coupler on freight-trains?

Mr. McKEEVER. No, sir; I never saw a Miller coupler on a freight-car.

Senator HARRIS. Do you use an automatic coupler on freight-cars?

Mr. McKEEVER. Yes, sir. Upon a certain class of freight-trains, a number of freight-cars that we are using, and nearly all we are putting out, we are putting them on.

Senator BARBOUR. The southern roads I believe are putting them on?

Mr. McKEEVER. The Richmond and Danville are putting them on.

Senator HISCOCK. Your system of roads is working into the use of them just as rapidly as practicable?

Mr. McKEEVER. Yes, sir.

Senator WILSON. How about the Star Line?

Mr. McKEEVER. They have the old couplers.

Senator BLAIR. How long have you been located at this station here?

Mr. McKEEVER. Possibly three or four years. I have been with the Pennsylvania Company for the last fifteen years.

ADDITIONAL STATEMENT OF MR. A. D. SHAW.

Mr. SHAW. Senator Wilson put the question which I was anxious to have answered. You did it just like a railroad man. I am talking of the Star Line and Empire Line cars. They are what we call among the railroad men "men-killers," and that road runs more of them than any other road in the country.

The CHAIRMAN. Which road?

Mr. SHAW. The Pennsylvania system.

ADDITIONAL STATEMENT OF MR. L. S. COFFIN.

Senator PLATT. I would like to ask Mr. Coffin a few questions.

Mr. COFFIN. I will be glad to answer you.

Senator PLATT. I believe Connecticut was the first State to adopt legislation on this subject, way back as far as 1882.

Mr. COFFIN. Yes, sir.

Senator PLATT. What has been the experience, do you know, under that legislation in the State of Connecticut?

Mr. COFFIN. The commissioner of that State at the conference of railway commissioners a year ago last March, held here in this city, spoke very unfavorably in regard to that; that it was not satisfactory, and he voted for a resolution, which was passed, requesting the Interstate Commerce Commission to take up this matter and have something done which would be uniform.

Senator PLATT. What was the trouble there? It is my State and I want to get a little more information.

Mr. COFFIN. The trouble was in selecting different types and not having one kind of coupler. That was the trouble.

Senator PLATT. Have they adopted the coupler of which you have been speaking there?

Mr. COFFIN. No, sir; I think they have chosen four. That is my impression, but I may be wrong. The Massachusetts law allows the commissioners to choose—

Senator PLATT. They ruled that the cars must be equipped with one of four kinds of couplers?

Mr. COFFIN. Yes, sir.

Senator BARBOUR. Do you know anything about the Canadian roads; how they are equipped?

Mr. COFFIN. No sir; I do not.

I want to say that it takes only about 20 or 25 per cent. of the cars in any freight-train to be equipped with power-brakes to control a train, and it can be controlled then better than any three brakemen can; where the engineer can control it without having the men on top the train.

The CHAIRMAN. What do you say about Mr. McKeever's statement that hand-brakes are more reliable than the air-brakes?

Mr. COFFIN. That is entirely owing to the negligence of the car inspector to see that everything is right. Is not that so, Mr. Shaw? It is all owing to the negligence of the car inspector. If he sees a draw-bar wrong he should report it; mark it. Much injury comes from that.

Senator BARBOUR. Sometimes those defects are concealed.

Mr. COFFIN. A good car inspector will find out the defects.

At 12 o'clock m. the committee adjourned.

WASHINGTON, D. C., May 14, 1890.

The committee met at 10 o'clock a. m.

The CHAIRMAN. We will hear Mr. Roberts, president of the Pennsylvania Railroad Company.

STATEMENT OF GEORGE B. ROBERTS.

Mr. ROBERTS. Mr. Chairman, my object in asking the privilege of appearing before this committee was not to interpose obstacles to properly securing the safety, both of the employes and the traffic, but to explain why we do not believe that this kind of legislation will accomplish what you hope to reach. On the contrary, in my judgment, such legislation as this would tend rather to retard the adoption of such devices as are from time to time discovered than to promote it. I suppose it will be admitted that we are all interested in endeavoring to do what we can for the benefit of our fellow-laborers, and we are all, at least the larger part of those who are engaged in railroad management, trying to adopt some method by which the dangers that come to those who are engaged in this class of business will be as far as possible removed. We know that those engaged in the system of railroad transportation have done and are doing a very large amount of work in this direction, and anything that seeks to interfere or cripple the natural growth of that effort, by endeavoring to hold it within the narrow channels of rigid legislation or shifting the responsibility therefor must, to a greater or less extent, interfere seriously with its progress.

In the case of the company which I represent, we have for many years, and to a greater extent now than ever before, kept up a perfect system of examination of all devices suggested for the safety of those who engage in our service as well as devices looking to economies in transportation. Both of these go in line. If you bend your entire energies to looking after the safety of the individual you cripple the economy

of transportation to a certain extent, precisely the same as if in defending the country you look too closely to the safety of the soldier you imperil the safety of the country. That may seem a harsh way of looking at it, but nevertheless it is what the public demand.

If the Pennsylvania Railroad Company, which to-day owns a little over one-tenth of all the cars in the United States, were required to put every car in the condition that this class of legislation would demand it would, for the time in which they are engaged in doing so, absolutely stop improvements in any other line, because the amount of money that would be required would be fully equal to all that they can in any one year reasonably command. It would require an expenditure of from \$70 to \$100 for each car, and on 100,000 or 110,000 cars that means between \$7,000,000 and \$10,000,000.

The CHAIRMAN. Is that the number of cars you have?

Mr. ROBERTS. Yes, sir. We have about 110,000 cars on our entire system.

The CHAIRMAN. Have none of those cars these appliances now?

Mr. ROBERTS. Yes, sir; about 10 per cent. I am speaking now in round numbers.

Senator BLAIR. Does that include your passenger cars?

Mr. ROBERTS. No, sir. All the passenger cars are equipped with air-brakes and couplers.

Senator BLAIR. You refer only to freight cars?

Mr. ROBERTS. Yes, sir. That amount of money is rather more than we expend annually in improvements upon our entire system, and many of those expenditures are not for the purpose of procuring increased traffic, but for the purpose of adding to the safety of the general public. Of course, we can not stop the general system of improvements and put all the money into Janney couplers or any other class of couplers that may be found right and proper, or into air-brakes.

Therefore we take the amount of money that we can properly appropriate and apply it in the best way for the purposes of economizing the methods of transportation and securing the safety of the employes and general public. That the want of a proper coupler causes a large loss of life and great injury to those engaged in the business goes without saying. No man can safely step between two cars, whether they are standing still or are moving, without running a risk, and if any appliances can be devised that will avoid that danger we ought to and will obtain them as rapidly as possible.

The CHAIRMAN. Are there no appliances which avoid danger?

Mr. ROBERTS. There are appliances developed from time to time that are tending in that direction, and they have been adopted. As stated, we have adopted them on our cars to the extent of about 10 per cent., principally in the past few years. But Yankee ingenuity brings forward so many of these things that it is dangerous, if you want to do what is right and proper and get the best thing, to hastily adopt any device that may be suggested, no matter how good it may seem for the moment of time. It will not do to take \$7,000,000 and change the entire equipment of the Pennsylvania Railway, and before you get through find that your \$7,000,000 has been unwisely expended. You might say that it is foolish to wait until you find something better, and not go forward, and I agree with you in that to a proper extent. But if left alone to their own investigation of the subject there is enough incentive to be found in the personal interests of the corporation, as well as in the humanitarian side of the subject, to prompt at least the larger corporations in this

country to adopt the new devices that are discovered and promote the investigations that will accomplish the desired result.

Senator BLAIR. If there were a general and universal law applying to all corporations, imposing as a primary necessity a provision for the safety of life in the progress of business, so that no one corporation would feel the pressure of that necessity more than another, to provide for safety in transportation to those engaged in it, would not that relieve you of this pressure that you speak of, so that you could impose upon the country at large an increase cost of transportation if necessary, and, regard being given to life first and to business profits afterwards, no corporation would suffer in consequence thereof? I am speaking now of an imposition of some general rule with reference to safety in the appliances that all corporations should make use of in their freight transportation.

Mr. ROBERTS. I think that all corporations will be bound to follow in this general line as rapidly as the circumstances surrounding those corporations make it practicable to do so.

Senator BLAIR. Consider this point in your reply: If you add to those circumstances one that does not now exist, the pressure of the law of the land, which shall be felt by all corporations alike.

Mr. ROBERTS. Certainly; if you do not carry the legislation too far, and make it require the improvement to be accomplished too rapidly within circumscribed limits. That is the difficulty. We are all human in this world, and unfortunately we are all looking largely after the dollar. There are many railroads in this country that simply could not do this.

Now, what would be the result to a certain extent? We are here seeking legislation that shall be for the benefit of the general public, not for the benefit of a particular class. If you were to say to us to-morrow, you must have every car engaged in interstate commerce equipped in this manner or you will be subjected to rigid penalties, we would simply have to say to our shippers, "We have just so many cars that we can devote to interstate business; you can not load anything in this car to go beyond the State; it is against the law;" and we would confine our shippers for the time, shorter or longer, to the use of only such cars of that character as we have.

Now, you may say that that would hasten our getting the other cars. Certainly it would, but the natural effort of the larger companies to get there will bring that result about as quickly and with greater safety and certainty than by legislation. You go to a small corporation in the West and impose upon it this sort of a measure. They have but one or two thousand cars. Their bridges are in a tottering condition. They are bound to protect their bridges and rebuild them. They can not put on these couplers and air-brakes, for they have not the money, and their business must be confined to State business. When they come to the State line and are delivering over to us, we say, "No; we can not have that car; it is not the right kind of a car." Therefore you seriously interfere with the local traffic of the country.

I do not know whether you gather from my remarks what I wish to indicate to you, and that is that, speaking for our own system of lines, we are strictly in harmony with everything that will tend to improve the transportation interests of the country in the line of taking care of the employes.

The CHAIRMAN. You have an organization, have you not, looking to that subject alone?

Mr. ROBERTS. Yes, sir. We have a corps of officers who are always

engaged in the investigation of approved appliance for the cars. It is a department of our company.

Senator HARRIS. Let me ask you if there is not a car-builders' association that is national, in which all the companies are interested?

Mr. ROBERTS. Yes, sir; there is a master car-builders' association, which is composed of the master car-builders of the various railroad companies of the country, and they meet and take up all devices and systems that are suggested for the improvement and betterment of the cars, the adoption of uniform standards, and their conclusions are received by the railroad companies as the result of much of the best intelligence that can be obtained on such subjects.

Senator HARRIS. Would it be hurtful to a railroad corporation if they were by law required to adopt such improvements and such devices as that association of master car-builders should from time to time recommend?

Mr. ROBERTS. Simply in the line that I have been endeavoring to point out, and that is, if the Master Car Builder's Association were to determine, as they probably would, that for the present moment the best system that they know of is an automatic coupler of this or that device. Now, if Congress says that every railroad company shall accept that as conclusive, and compel them within one or two years to change all their cars to conform to that design, subject to the penalty of not permitting their cars to run in that class of traffic, many railroad companies could not afford to do it.

The CHAIRMAN. Suppose Congress should determine that that must be done within some reasonable time; what time do you think that should be?

Mr. ROBERTS. It is very difficult indeed for me to determine what time that should be. As I said before, I think that that could be better and sooner reached by Congress not determining that interstate cars should be at any time equipped with a specific improvement. But Congress probably might go so far as to appoint a commission to see that the locomotives and car equipment of the various transportation companies of the country engaged in interstate commerce are in suitable condition and in accordance with their own proper standards. If the Federal Government get into this class of legislation why stop simply in determining that a car should have a coupler of this special character. Why not also that it shall have a steel axle, which shall be subjected to such and such tests? It is only within a very few years that the loss of life from the breaking of axles was very great. Or why not say that the locomotive boilers should be made of such and such thicknesses of steel, or all locomotive boilers shall be built of steel and not of iron. If you legislate on these details of construction, then the railroad companies are naturally relieved from responsibility in that direction, and their experiments come to an end.

At Altoona our company are continually conducting experiments in reference to the character and composition of the metal used in boilers, of the metal used in car axles, and of that used in rails. If you are going to subject the railroad companies to this class of supervision, then you might as well go into that and into the character of bridges, which is as serious a question as we have to deal with, and say that the bridges must conform to such and such standards. Therefore it is my idea that the details should be left largely to the railroad companies, and that the legislation should be more in the line of a general supervision. Probably it is necessary and right that the Government should take a general supervision, and you will do me the justice to say that I have

never been opposed to Congressional legislation in reference to the transportation interests of the country. I only think that Congress made a great error when it did not take it up twenty-five or thirty years ago. It let the thing grow without any proper system of laws to govern and to regulate the individual or the corporation until the matter got into such a condition that it was hard to regulate it. And they injected into it an act which it is remarkable to me has not done greater harm. It was a wise effort, and I would not like to see it repealed, but I would be very careful in amending it. I would take any reasonable length of time that is necessary to thoroughly investigate any thing that tends to interfere with individual or corporate efforts looking to the care of the employes and the economy of transportation. Certainly no country in the world owes more of its success to the efforts of those who have been entrusted with management of transportation than our own country. Its whole prosperity depends upon its transportation economies, because it is a country of great distances; and any thing that unwisely hinders transportation must largely interfere with the movement of the products of the West to the sea-board.

Senator REAGAN. You mentioned that there was a department in your service giving special attention to the safety of life and property by new appliances. Please state to the committee what the character of the efforts made by your company is in that direction.

Mr. ROBERTS. Our work covers a wide field. Take for instance the lighting of the car. We have been five or six years at that. At one time gas was thought to be the safest and best light for a car. We had a most appalling accident occurring from gas. What was left of the train that did not get under water was burned by the gas above it.

We have now perfected what we think is probably the best system of lighting. If the Government had stepped in when that accident occurred from the use of gas and had said, "no more gas, the best thing to be used is oil," that would have stopped any further investigation of the question of lighting cars.

Next, as to the system of heating cars. The public have the idea that a car heated by a stove is a dangerous thing, and therefore the direction of legislating is against their use and in favor of steam.

If we were satisfied that it was the best thing to heat a car by steam, and if it were reasonably practicable to do so, we would do it. We have expended many thousands of dollars in experimenting in that direction. Mr. Ely, who is here, has charge of that matter. He has equipped a whole train and worked at it for years. When we gave an order that one or two hundred passenger cars should be equipped in that manner there was much discussion as to the wisdom of such a course, not as to the cost, but as to the wisdom of it, and whether or not the apparatus that we were going to inject into our system was not a great mistake. We had before us the fact that in a railroad disaster there were several persons found sitting bolt upright, dead from inhaling steam.

Steam that is injected into a car to heat it, or that will be used if you undertake to say that cars must be heated by steam, will, when inhaled, be at a temperature that will certainly cause death. Not that cars can not be heated with steam, the inhaling of which will not cause death, but a rigid law compelling railroad companies to heat their cars with steam will almost insure the fact that a large number of them will be heated with an apparatus far more dangerous than the ordinary stove.

The CHAIRMAN. What do you do now with the one hundred cars you referred to?

Mr. ROBERTS. We are heating now over one hundred cars with steam apparatus. But the difficulty of applying that, of getting the proper character of steam so as not to interfere with the economy of the train and to insure to the individual greater safety than he has in the ordinary stove, is a very serious subject.

Senator REAGAN. What experiments has your company made in the way of couplers and head blocks on freight cars outside of the common link and bolt couplers?

Mr. ROBERTS. If you will permit me to let these matters be answered by Mr. Ely, who will follow me, I shall be obliged. He is the superintendent of the motive power of our road, and can answer them better than I can.

Now, the only object I had in appearing before you was to endeavor to indicate to you the difficulties that must arise from legislation which seeks to hold railroad companies in narrow lines and take away the competition that now exists between them in availing themselves of the ingenuity and invention that is devoted to effecting economies in transportation. It is a very dangerous thing, and ought to be approached with a great deal of hesitation.

I appear here not as an advocate of the Pennsylvania Railroad, because probably these measures would do us as little harm as any other corporation in the country. We will get there just about as soon without this bill as with it; probably sooner and better. When I look at the grand system of railways in this country and know the numerous corporations who are not able to respond to this character of legislation, and the communities depending upon the ability of those corporations to serve them properly, I know that they must be permitted to a certain extent to determine exactly what is the best thing and to put the dollars that they have into that thing and that in such matters we must make haste slowly.

The CHAIRMAN. Have you any knowledge of the general progress that is being made in this direction?

Mr. ROBERTS. I can say that there is great progress being made; that in the adoption both of the coupler and the air-brake we are way ahead of England with all its legislation; it has hundreds of laws to govern its railways and bring them into rigid lines. None of you would compare the comfort of riding in a first-rate car in this country, both as to speed and comfort, with a car in England. Their progress in the way of transportation is much behind this country, and if they get at greater safety in taking care of the public it will be from the fact that they have a greater amount of money to appropriate for that purpose. If, when our railroads were first built, you had required them to be built of the character that you find, you would not have had any railroads in many parts of the country simply because capital would not have embarked in such a costly enterprise at that time. Therefore we must take the country as we find it, and believe that as the railroad corporations become stronger they will get better appliances for the safety of their employes and the public just as to-day they have better and safer cars and locomotives, better railroads, better rails, better cross-ties than any country that has ever attempted to prescribe the adoption by railroad companies of any particular character of car, locomotive, rail, or other device.

STATEMENT OF THEODORE N. ELY.

Mr. ELY. Mr. Roberts has so fully explained to you the general situation relating to the various bills under consideration that I fear I shall not be able to add much of interest. I can, however, indorse, without reservation, what he has said in regard to the inadvisability of any Federal legislation whatever as applied to the regulation of safety appliances for railroads.

I can not find words more fitting to express our objections to such legislation than are contained in the proceedings of the Board of Trade of England, quoted at considerable length in the report of the Interstate Commission, and more especially referred to in the very able letter written to the Commission by Mr. M. N. Forney. There will also be found in the appendix to the report of the Interstate Commission a letter which I wrote in response to their circulars propounding certain questions. That letter explains very fully my own views upon the subjects treated, and I need not repeat them here.

It may be of interest to you to know what organization the Pennsylvania Railroad has for work of this character. There is established at Altoona a corps of experts, of which I have the pleasure of being the head, whose sole duty it is to investigate all questions concerning the physical operations of the road.

This corps consists of a mechanical engineer of high standing, several assistants, and a large force of designers. To this division of the department are referred all mechanical questions, such as couplers, air-brakes, etc. It has a well-equipped laboratory for making physical tests and ascertaining the strength and other properties of materials.

The assistants of the mechanical engineer first receive a technical education at the scientific colleges, after which they are thoroughly trained in the workshops and upon the road; after this they are selected according to their ability for positions with the test department.

The department of chemistry is in charge of a chemist well known in this and other countries for his professional ability. The work of this department is of such a magnitude that three or four chemists and other assistants are constantly employed.

In this laboratory are investigated a long list of items which may be said to bear directly upon the safety of employes and the public, such as the examination of burning oils and gases used in the lighting of cars, the examination of high explosives and inflammable substances offered for transportation. Since the establishment of these bureaus, some fifteen years ago, many printed specifications have been issued which have become to a great extent the recognized standards of this country, and many have been sent abroad for the guidance of railroad people in other countries.

Tests have also been made for the United States Government, some of which, as relating to oil for use in light-houses, have been of great value. You will, therefore, undoubtedly appreciate that such matters as are referred to in the bills under discussion have received very careful and uninterrupted attention in the most intelligent and painstaking way, and the large expenditure due to the maintenance of this bureau is practical evidence that the Pennsylvania Railroad considers these matters of great importance. It would take me a long time to enumerate the quiet work which has been done to make the handling of freight and passenger trains safer and more economical.

I especially refer to work which is not prominent to the public. The

improvements that have been made in the strengthening of the timbers and the frame-work of cars, the widening of platforms and running boards, and the strengthening of wheels and axles have greatly decreased the number of fatalities due to broken-down cars or injuries from unusual shocks.

A single instance may be mentioned: The car-axle most generally used several years ago was made from scrap-iron and the number which were broken in service led to a careful investigation which resulted in a specification that all axles should be made from new iron and should be subjected to certain tests. The price of the new axle was over 50 per cent. more than those formerly used, and notwithstanding the large expenditure involved the Pennsylvania Railroad adopted the new standard at once and proceeded to remove from service as rapidly as possible axles which had before that time been regarded as suitable for railroad work and which were in general use throughout the country. The class of accidents most dreaded, especially on double-track road, are those due to the breaking down of freight-trains about the time a passenger-train is due. When the question is under consideration as to the desirability of having a board of Government experts the existence of railroad bureaus of this kind should be carefully considered. I believe that no board could be formed that would be as efficient as this railroad bureau; it requires every-day contact and a living connection with the subject to secure the best results and most intelligent judgment. For this reason a Government board would not do good work or make rapid progress.

The CHAIRMAN. Such improvements you are constantly making?

Mr. ELY. Yes, sir.

Senator HARRIS. Can you tell the committee to what extent other railroad companies are engaged in the same character of work as you have described as applicable to your own company?

Mr. ELY. I can only say this: The Pennsylvania Railroad was the first to establish a bureau of this kind. We felt the need of it from all stand-points, from the stand-point of safety as well as from that of economy. The bureau was established about 1874, sixteen years ago.

Senator HISCOCK. Suppose you confine yourself to the question Senator Harris asked you.

Mr. ELY. Yes, sir. There did not seem to be any similar movement by other railroads of the country for a number of years after 1874, but within the last seven or eight years there have been a number of bureaus of a similar character established throughout the country, I can not say where or how many, but I know in New England there have been two or three. The Chicago, Burlington and Quincy road has quite a prominent one, and the Milwaukee and St. Paul has a department of this kind. In many instances the men who organized them have been drawn from the Pennsylvania Railroad's department. We have been constantly asked to recommend men for such work. The movement within the last three or four years has grown very rapidly, to such an extent that there has lately been organized an association of railroad chemists doing nothing but railroad work.

Sixteen years ago I do not think there was such a thing as a railroad chemist in existence, and the same is true with regard to other matters of railroad management. I think that answers the question of Senator Harris.

Senator HARRIS. Of course it leads in that direction. My object was to ascertain to what extent railroad corporations were bending their energies in regard to the adoption of such improvements as would give greater safety to the employés and to the general public.

Mr. ELY. The first thing to be done is, of course, to put intelligent men at the head of such affairs, and then for those men to act as rapidly as they can. A fool will often act more rapidly than an intelligent man; and the easiest way sometimes by which to get rid of a matter is to arbitrarily adopt it, and then dismiss the subject. We commenced with the question of couplers some twenty years ago; and the coupler which is now spoken of most favorably—the Janney car-coupler—was first used by the Pennsylvania Railroad on its passenger trains.

There were a great many defects in the Miller system, which was then pretty universally used on passenger-cars, and we thought it was not as good as the Janney; the Miller couplers certainly produced some degree of safety, but they also introduced dangers, I mean in some respects; they were not as safe as the pin and link for holding cars together. But in case of shock or collision they were safer. We applied these Janney couplers to about forty passenger-cars in the centennial year; we thought them right, but waited the result of the trial before adopting them generally on the three thousand passenger-cars that we were running. That went along and at the end of a year we found a great many defects in them, which could not have been known without a practical test; the result has been that what we started with originally as the Janney coupler is now very different mechanically, although in a patentable sense it is very much the same.

The CHAIRMAN. Is it made by the same patentee?

Mr. ELY. Yes, sir. In other words, the Pennsylvania Railroad developed it; many of the ideas that have made it successful were developed by the Pennsylvania Railroad in its own shops, by its own corps of experts, about whom I have spoken to you. The Pennsylvania Railroad has no interest in the patents in any way, but suggestions from mechanics here and there enabled the patentee to improve upon its original construction. He came to us with an idea and left with a useful thing.

The CHAIRMAN. And you have perfected his idea?

Mr. ELY. Yes, sir.

The CHAIRMAN. He has that yet to make money out of?

Mr. ELY. I hope so, as he had a hard and long struggle. However, we at once, as soon as we were reasonably sure that the coupler was safe—now mark you “safe,” that was the only thing we asked for then—put it on all the Pennsylvania Railroad cars and it has been in use for a number of years.

The CHAIRMAN. You mean passenger cars?

Mr. ELY. Yes, sir; on passenger cars. On freight cars of course it has only been very recently that this matter has been taken up vigorously; I suppose five years ago we commenced experiments with freight car couplers; the natural thing for the Pennsylvania Railroad Company was to adopt the coupler it had already used for passenger cars. A close freight coupler was desirable in connection with the air-brakes, but not necessarily an automatic coupler. We first tried the Janney coupler, as used on passenger cars, but found that it was not practicable; as constructed it was too weak in many respects to bear the severe shocks to which it was subjected. It has since been so strengthened that railroads have felt warranted in applying it to a large number of cars; that is, the Pennsylvania Railroad alone has this coupler on 10,000 out of 100,000 cars, and it is comparatively successful, although it is too early as yet to express a decided opinion as to its durability.

The CHAIRMAN. Can that arrangement be improved?

Mr. ELY. I think it will be found that it can be.

Senator HISCOCK. Suppose Congress should pass a law in the form that this bill proposes, with the definition that the coupler that is to be used under that law be literally complied with, and still the coupler need not be any improvement whatever upon the link and pin.

Mr. ELY. I should say the one that I have referred to might improve the pin and link.

Senator BLAIE. There are several bills which contain different provisions. To which do you refer?

Senator HISCOCK. The automatic coupler.

The CHAIRMAN. They all provide in a general way for an automatic coupler.

Senator HISCOCK. What I want to get at is this: Whether there are any plans that that statute literally requires to be complied with that would not be an improvement upon any other methods of coupling.

Mr. ELY. Yes, sir; I think you can make them decidedly more dangerous than they are and still comply with some of these bills. Automatic couplers could be and have been made which would be much more dangerous than the pin and link.

Senator HISCOCK. What I want to get at is this: If these were enacted into law whether, then, relying upon the law and keeping within the letter of it, it would necessarily, in regard to safety, be an improvement upon other methods?

Mr. ELY. You mean existing methods?

Senator HISCOCK. Yes, sir.

Mr. ELY. I think you might get on very dangerous ground and make it more dangerous than it is now. You must make the provisions absolute; you must have the coupler uniform, or practically uniform, so that any man on any road that has to handle them will at once be familiar with what he is handling and know it will perform certain functions, otherwise there will be hesitation and danger; he will go between the cars to examine them and to see what will make them couple, and grave dangers would be introduced in that way.

The Master Car-Builders' Association, for a number of years, was conducted upon a wrong principle; that is, a road having 500 had the same voice in the adoption of improvements as one having 100,000 cars. The Pennsylvania Railroad, therefore, refused to have anything to do with it, because it was, practically, an inoperative body, so far as standards were concerned. We then suggested that a reorganization be made on the basis that each company should have one vote for every thousand cars that it owned.

The CHAIRMAN. What organization is that?

Mr. ELY. The Master Car-Builders.

The CHAIRMAN. You are a member of it?

Mr. ELY. Our company is. We contribute very largely to its support, and if the railroads of the country would send their experts in the car-building line to the convention we would get views from all sections of the country, and be more apt to obtain the most intelligent and finally the best results.

The Master Car Builders' Association, which represents probably two-thirds of the country—not all, some roads having nothing to do with it—after a number of years recommended a certain type of coupler, with which you are familiar. Now, that type, by some quite prominent roads as you may know, is not considered the right type at all; they would consider it an injustice if made to use it by law.

The CHAIRMAN. Do you mean as a means of safety? Would they think it was a dangerous thing to use?

Mr. ELY. I do not know that they would object to that one point, but they say the form is necessarily a weak one and the breakages would be very large, which would make the type impracticable. I mention this only to show that there is not an absolute unanimity of opinion even among some of the largest roads, and I therefore think that the time has not arrived for legislation of this kind, compelling the use of any couplers, because to be of the best use the bill must make the couplers uniform or else new dangers will be introduced.

Senator HARRIS. Let me ask you in that connection this question: If all the railroad corporations of this country were compelled by law to adopt, from time to time, such devices as this association of master car-builders should recommend to be adopted, of course within a reasonable time after the recommendation, would it not greatly add to the safety of human life and limb and the safety of the general traffic on railroads?

Mr. ELY. I think I might say yes and no both to that.

Senator HARRIS. I should like to know to which one of the answers you attach the more importance?

Mr. ELY. It is a question that cannot be answered directly, for this reason: The Master Car-Builders' Association is a voluntary body of men, and their acts can not govern any one who does not wish to join that association, or have anything to do with them; this is evidenced from the very fact that the manager of one of the largest systems in the South said that he did not approve of the coupler which the Master Car-Builders had recommended—so that it would not be just or fair, and it would certainly interfere with the rights of the people, to pass a law requiring them to use what this Master Car-Builders' Association recommended.

They do recommend some things that are safe. I might say here that the original idea of the association was to promote a uniformity in the construction of cars that should be of a certain height; that the axle should be of a certain size, etc., so that every railroad would not have to keep on hand special materials to repair the cars of every other railroad in the country. Much that they have already done has promoted the safety of trainmen and others; but if asked to say whether everything they have to recommend to be adopted would be a means of producing greater safety I should say no.

The CHAIRMAN. Suppose Congress should enact a law with this provision:

That it shall be unlawful for any corporation, company, person, or persons operating any line of railroad, or for any car or transportation company using or leasing freight-cars engaged in interstate commerce, to put into such use any new cars, or cars that have been sent to the shops for general repairs, or when either of whose draw-bars need to be replaced with new ones, that are not equipped with safety automatic couplers or draw-bars.

I will put it in a different way. Suppose that Congress were to enact that after 1895 no car should be used that did not have a safety automatic coupler. Now could there be anything wrong in that? Does that declaration, the use of the term "safety automatic coupler," confine you to anything that you would not use if your were to undertake to make best improvement upon your cars that you can, and would the time specified in there be too short?

Mr. ELY. I should say that that law would probably tend to kill a great many more men than are killed to-day, if worded in that way.

The CHAIRMAN. Why?

Mr. ELY. Because under the law a thousand different kind of couplers that would meet the requirements of that law could be used, and

with that number of couplers there would be a great many more men killed than to-day, necessarily.

Senator HARRIS. Do you mean to say that there are a thousand different kinds of automatic couplers?

Mr. ELY. Yes, sir; over ten thousand different kinds. I think there are seven thousand in the Patent Office.

The CHAIRMAN. Does not that provision, though, leave the matter within the discretion of the railroad corporation, just where you want it, and that is to determine for yourself what you shall use, except that it is to be an automatic coupler?

Mr. ELY. No, sir; I think it is a little insidious; you say they must use that sort of thing. They could say, "if I must have that sort of thing, I will use the cheapest I can get to meet the law."

The CHAIRMAN. Would you do that?

Mr. ELY. No, sir; we would not do it. We have applied the Janney coupler and Westinghouse air-brake to about 10,000 cars; they certainly are not the cheapest appliances, but we thought them the best.

The CHAIRMAN. Do you say that any railroad company which pretends to be governed by any of the rules of humanity would pick out, if we were to legislate that they should put on an automatic coupler, and put on the meanest thing they could find?

Mr. ELY. I think some of them might put on the cheapest. I can refer you to a pamphlet of the New England Club in which is discussed a coupler that was used on our Western lines several years ago; it is called the Safford automatic. Its use was discontinued a long time ago. I believe some modifications have been made since that time, but it is still practically a link and pin, which, although in a certain sense automatic, still has the objectionable slack.

Senator BLAIR. What reason do they give? Surely they do not urge its adoption because it is unsafe and weak.

Mr. ELY. I presume because it is cheap.

Senator BLAIR. Would they not, as a matter of safety and economy, recommend the adoption of any other coupler?

Mr. ELY. I can not say.

Senator BLAIR. The question that the chairman raised was, are not the automatic couplers, or the better class of automatic couplers, better than the old system?

Mr. ELY. Not that one.

The CHAIRMAN. This bill we are referring to now, introduced by Senator Allison, does not undertake to determine the particular kind of automatic coupler at all, but it says an "automatic coupler." Now you say there are about ten thousand kinds of them.

Mr. ELY. Yes, sir.

The CHAIRMAN. It leaves to the railroads the discretion to determine which one they will adopt, and I should think if any legislation of that sort should be enacted at all it ought to be enacted that railroads should all be governed by the general judgment as to what would naturally be the best thing.

Mr. ELY. If you give them credit for their judgment to do that, you should also give them credit to do it without law.

The CHAIRMAN. Sometimes there is a sort of disposition to procrastinate among people, and not to spend money if they can get out of it. I do not say that particularly of the railroads, but that is the natural way.

Mr. ELY. Yes, sir; that is true; but in such matters we must make haste slowly.

Senator BLAIR. I understand your judgment is that the automatic

system of coupling is more dangerous than the anti-automatic system, if there is such a system?

Mr. ELY. Do not understand me that way at all. I say there are so-called automatic couplers to-day that would fill that bill which are more dangerous than the pin and link in general use.

The CHAIRMAN. At the same time there are automatic couplers that would make it safer to employés in the present situation?

Mr. ELY. Yes, sir.

Senator BLAIR. The best of the automatic system is better than the best of the other system?

Mr. ELY. Yes, sir.

Senator BLAIR. When used, it has proved itself better than the other systems?

Mr. ELY. That can not be said at this stage of our experience. We only know that the results thus far obtained are encouraging.

The CHAIRMAN. Let me ask you a question as to another bill, a bill introduced by Senator Hoar: "To secure the safety of freight cars employed in interstate commerce, by the proper use of proper couplers, freight-train brakes, and other appliances prescribed by the Interstate Commerce Commission." Suppose that such a law should be enacted, authorizing the Interstate Commerce Commission to prescribe the sort of couplers which should be adopted by all railroads on all cars within a certain time, say 1895, what would you say to that?

Mr. ELY. I would say just this: That if a law is passed requiring that a certain automatic coupler must be used it will have a bad effect. We should aim to get the best effects. I say there is no competent body, nor can you appoint any committee that can act with sufficient definiteness to warrant the passage of a bill that can say what will produce the best effects.

The CHAIRMAN. Suppose Congress should pass an act "That it shall be the duty of all common carriers by railroad that are subject to the provisions of the act to regulate commerce to supply and use automatic car-couplers on all freight cars employed in the business regulated by said act," and that a commission of experts should be appointed to determine and report to the Interstate Commerce Commission their recommendation of the type of character of coupler found by them to be best adapted to use, and that within a given time the railroads should adopt the pattern so recommended by them, what would you say to that?

Mr. ELY. I have said no, to the first part; I have not considered the last part. I should think a board of experts would be an excellent thing to investigate and report upon these questions as information to the Government and to the railroads, but say emphatically that no laws should be passed compelling railroads to adopt appliances which they might recommend.

The Board of Trade in England has been in existence fifty years; they are an intelligent body of men, and we ought to study its history carefully as affecting the interests of railroads as well as the public. In this sense a board of experts might be a very good thing, connected with some department of the Government, preferably the Interstate Commerce Commission; if composed of the right kind of men, it would give its reasons intelligently and without prejudice, and would say whether it would recommend legislation or not, by which we should be governed in the use of railroad appliances. To this board would also be referred, for investigation, bills which are presented as relating to this subject.

Senator REAGAN. Would it be safe, after providing for such a board

of experts, to say that they should recommend some system which should be put in operation within any specified time, by gradually putting on the appliances, or an absolute time, when the safety-brake should be put in operation?

Mr. ELY. There are so many conditions that surround that that I can not say positively, but I certainly would not recommend the enactment of laws enforcing their recommendations. I think if we start with these inspectors, and get reliable information before a committee of the Senate, that they can then study it in all its aspects, and especially as to whether it is financially possible for the railroads throughout the country to employ what these inspectors recommend, and that aside from the question whether the appliance is a good or a bad thing.

Senator REAGAN. We are informed that the Master Car-Builders' Association has been making certain investigations on this subject, and making suggestions; but there is no power to secure the adoption of these suggestions even if it should be wise.

Mr. ELY. It has the power of a big ball; it is very difficult to start it, but when in motion it is not overcome by trifles or the prejudices of narrow men. The movement is now well inaugurated, and we find at this time something like one hundred thousand cars, probably one-tenth of the equipment of the United States, equipped with automatic couplers of the Master Car-Builders' type.

The CHAIRMAN. Then there are about one million cars in existence?

Mr. ELY. Yes, sir.

Senator REAGAN. You think it is the best thing to leave these appliances to be worked out by the railroads themselves?

Mr. ELY. Yes, sir.

The CHAIRMAN. You spoke of this Government board of experts or inspectors. I suppose this is true that the large railroad companies—the Pennsylvania Railroad and also the Car-Builders' Association, employ the highest type of mechanical skill and ability in their work?

Mr. ELY. Yes, sir; it is above the average.

The CHAIRMAN. They try to get some of the best people they can possibly get?

Mr. ELY. Yes, sir; they do get some of the best, but the average is better than the average of mechanics throughout the country.

The CHAIRMAN. I am not speaking of the general workmen. I am speaking of those upon whom they depend for the devices that they shall use and the plans of construction. And as to them, they employ the very highest talent obtainable?

Mr. ELY. Yes, sir.

The CHAIRMAN. If that be true and they are at work in that direction, how would you be benefited by a political board to be appointed?

Mr. ELY. Only as an intermediate body between the railroads and the Senate, we will say, or the Government. If the Government wants to know about these things, it would be very difficult for them to go to every railroad and get an opinion on this or that device. It would be impossible. If they have inspectors, men of intelligence and without prejudice, they could investigate and put it before them in precise form.

Senator BLAIR. You think it would be a protection to the railroads to withhold legislation?

Mr. ELY. It would; yes, sir.

The CHAIRMAN. What do you say to a provision of this kind: "That for the purpose of securing uniformity in the use of such car-couplers and the most approved character of coupler, the President of the United

States is authorized to appoint, by and with the advice and consent of the Senate, a board of five competent persons, three of whom shall have practical knowledge of the operation of railroads, and two of whom shall have mechanical knowledge of car construction, and none of whom shall be interested in any patent for safety appliances."

Mr. ELY. This is just in the direction that I indicated, and I think that is the best practice; the idea is right, but there should be no compelling law.

The CHAIRMAN. You are willing to have a commission appointed to investigate, but you do not want any thing further done about it?

Mr. ELY. Yes, sir.

Senator HISCOCK. Do you think the effect of it would be that it would be found that it was better to have Congress let it alone?

Mr. ELY. I think the inspectors would advise Congress to leave it alone.

Senator BLAIR. You think it is best to leave it as it is, without any legislation?

Mr. ELY. Yes, sir.

The CHAIRMAN. Would not that be regarded by you gentlemen as a sort of protection, and would you not then do nothing in this matter?

Mr. ELY. Oh, no; do not underrate what has already been done without law; I think the moral influence of the inspectors would be splendid. I might read to you from the letter which I wrote to the Interstate Commission.

Senator BLAIR. What is that letter?

Mr. ELY. It was in regard to legislation.

The CHAIRMAN. I do not think it is necessary to have it read now.

Mr. ELY. I can speak without prejudice, for the reason that the lines with which I am connected have gone far enough in the matter of improved appliances to indicate what they think ought to be used.

The CHAIRMAN. This committee desires to ascertain if any legislation is available, and if so, what?

Mr. ELY. I have studied that matter for a number of years, because I have many friends abroad who have asked the same question you are now asking me, and think, generally speaking, that what has been done in England has been in the right direction; we could not follow that course exactly, but possibly with some modification it could be suited to our conditions.

However, as already said, I do not think compulsory legislation advisable. Further, from the best information obtainable, I feel confident in saying that I do not believe that the responsible manufacturers of automatic couplers and brakes would advise you to enact laws compelling the use of such devices, especially if any time is fixed. They might have thought differently at one time when very little was being done, but the conditions have so changed that I am sure that they would now advise against legislation.

The CHAIRMAN. You agree that there is a vast amount of injury and a large number of deaths resulting from this present mode of coupling cars, do you not?

Mr. ELY. I agree to that.

The CHAIRMAN. It has not been more than a month ago that four or five hundred persons were killed by the coupling.

Mr. ELY. The estimates which are printed are not far out of the way, though I believe they are above the average of the Pennsylvania Railroad. The human element is stronger in those who operate railroads than is found in the public generally; those who do not deal with rail-

road operations little appreciate the great strain railroad superintendents are under night and day, nor the sadness that follows a day of casualties. It has no parallel in any other profession.

Senator REAGAN. What is your judgment as to the effect of these improved couplers upon the property and interests of the railroad companies outside of the question of humanity for the employes; would it promote or injure it?

Mr. ELY. I think a well-designed coupler might prove a source of economy in management aside from any question of safety; but that, of course, has yet to be established.

STATEMENT OF C. W. BUCHHOLTZ.

Mr. BUCHHOLTZ. Mr. Chairman, I can add very little to what Mr. Roberts has already said, except in so far as the New York, Lake Erie and Western Railroad Company, one of the three trunk lines, is concerned. They are doing every thing they can in the direction which the legislation in these bills indicates. I have a few figures here which will show how much the Erie Company has done in this direction for the last three years.

The CHAIRMAN. Is that your road?

Mr. BUCHHOLTZ. Yes, sir; New York, Lake Erie and Western. It is called the Erie.

The CHAIRMAN. I did not know whether it applied to the whole country or to your road?

Mr. BUCHHOLTZ. Our road. The total number of cars under the control of the Erie is about forty thousand. Of that forty thousand in 1887, not one of them was equipped with any automatic couplers. To-day we have over three thousand, which is more than 15 per cent. of the entire number of cars. I speak of freight cars. Of course the passenger cars are all equipped with them.

As far as the power brake on the locomotives is concerned, I may state that in 1888 of the total number of seven hundred and fifty-six locomotives three hundred and one of them were equipped with the power brake. To-day out of a total number of eight hundred and twenty-seven, five hundred and thirteen of them are equipped with power brakes; in other words, more than two-thirds of them, which seems to prove to me that if our railroad company is left alone it will get there as rapidly as any of these bills propose they should.

Mr. Ely has stated that all the railroad appliances in this country, as well as the railroad construction, are far ahead of those in Europe. Being somewhat familiar with those in Europe, and especially with those in Germany, I can say that they are absolutely under the control of the Government, and for that reason, unfortunately, I think, the progress in railroad appliances there is less than in any other country that claims to be civilized. They are very much crippled by improvements adopted to-day, which are not suitable to-morrow, and in changing from one to the other they have gone way behind what they would have done had they belonged to private corporations.

We have built and will build bridges with stone without any legislation. We have adopted the power brake universally without any legislation, and it seems to me that the interests of the railroads will be better subserved by letting them adopt their own improvements rather than by Congressional legislation.

The CHAIRMAN. You say, as a matter of fact, in Germany, where the

Government owns and controls the railroads, the regulation of the appliances by the Government has retarded and prevented the adoption of the safest and most modern devices?

Mr. BUCHHOLTZ. Most inevitably, and for this reason: To some extent it kills private enterprises, and above all things the Government would not assume responsibility for the couplers. The couplers decided upon by the commission of experts appointed under your action would be forced upon the railroad companies to use in a certain period of time, and they might like to do so, but they would thereby be relieved of all responsibility for its success, and would simply adopt it without knowing anything about it. That is what they are doing in Germany. They have a number of experts doing nothing else except to provide improvements, and the people who are interested in railroads wait until such improvements are developed and then they adopt them.

Senator BLAIR. I should think you gentlemen who are at the head of transportation in this country would see to it that Congress did not act foolishly in that regard, but would require only the best kind of coupler or appliances which were made.

Mr. BUCHHOLTZ. That would be done by this commission that Mr. Ely speaks of. If you had such a bureau attached to the Interstate Commerce Commission that bureau would act as an intermediary—

Senator BLAIR. If there were such a law, which required a certain coupler, for instance, to be used, do you not think before there was such a law enacted you gentlemen would see that it required the best kind of coupler for the transportation interests?

Mr. BUCHHOLTZ. We would try to do so.

Senator BLAIR. You would certainly see to it, because the Government is simply reflecting the popular will, and you gentlemen would make the law. As it is now you try to make the law. You will make the law for yourselves when you get to that point of intelligence when you know what you want absolutely yourselves. You will then make it for your system of transportation, and for these others who are behind and who never catch up.

Mr. BUCHHOLTZ. I do not think so. Railroad companies do not have much chance in making laws. We are not very popular among the people or the States, or anywhere else.

Senator HISCOCK. Where these automatic couplers are used on freight-cars, do you make up trains in which that mode of coupling and the hand coupling are both employed in the same train?

Mr. BUCHHOLTZ. Not if we can avoid it.

Senator HISCOCK. You make them up with the same kind of coupling all the way through?

Mr. BUCHHOLTZ. Yes, sir. If we did not I think the danger would be increased over the ordinary coupler. If you mix the two up you increase the percentage of risk.

Senator HISCOCK. That would be the effect of it?

Mr. BUCHHOLTZ. Yes, sir.

Senator HISCOCK. So that as you increase your automatic couplers that practically is an inducement, a necessity, of going on increasing as rapidly as you can?

Mr. BUCHHOLTZ. Yes, sir.

Senator HISCOCK. Do you know anything about the average of accidents on the trains where they are in use and where they are not?

Mr. BUCHHOLTZ. I cannot state what the percentage is. In fact I do not know that data has been kept long enough for anybody to state.

The automatic coupler has only been used within the last two or three years.

Senator HISCOCK. You do not think that there is at present any attainable data to show whether the percentage of accidents to human life or injury to humanity is less or greater on trains operated by the automatic couplers, or on those that are not?

Mr. BUCHHOLTZ. No, sir; I think there are no statistics to prove that.

Senator BLAIR. What danger is there to a brakeman on a train which has the automatic coupler that does not exist on any other train?

Mr. BUCHHOLTZ. The brakemen do not have to step in between the cars.

Senator BLAIR. That is a danger that does not exist. What danger is there that does exist?

Mr. BUCHHOLTZ. There is no new danger.

Senator BLAIR. Then you say that the safety is not increased by the automatic coupler?

Mr. BUCHHOLTZ. Oh, no; I said it was increased.

Senator BLAIR. Do you think the automatic coupler is more dangerous?

Mr. BUCHHOLTZ. No, sir.

Senator BLAIR. Then it is very apparent why there should be no data collected as yet.

Mr. BUCHHOLTZ. There has been none collected as yet.

Senator BLAIR. To show that the automatic coupler is more dangerous?

Mr. BUCHHOLTZ. Oh, no.

Senator HISCOCK. My question was whether there was any data collected yet?

Mr. BUCHHOLTZ. No, sir.

Senator BLAIR. My question is to this effect, that if the automatic coupler simply removes a danger and does not produce a new one, it is quite absurd to expect any data to prove the contrary.

Mr. BUCHHOLTZ. Yes, sir.

Senator BLAIR. It is conceded that the automatic coupler is a better coupler?

Mr. BUCHHOLTZ. Yes, sir. There is one danger which arises from the carelessness of the men themselves. If the devices put on there should stick, the men would be very apt to step in between and look in there. There is no need of that; it is the man's own carelessness.

The CHAIRMAN. You think the automatic coupler should be improved and put in use by the railroads as far as possible?

Mr. BUCHHOLTZ. In a year or two it would be better.

Senator BLAIR. There is no coupler that is invented that will prevent a man from going in between two cars?

Mr. BUCHHOLTZ. I do not know; they ought not to go in between them.

The CHAIRMAN. If any legislation were enacted on this subject at all as to the adoption of devices for greater safety or otherwise, state whether it should or should not be uniform all over the country; that is to say, if a particular patent or device is adopted by your road and not observed generally, whether that device ought not to be uniform all over the country?

Mr. BUCHHOLTZ. It should be uniform in time. There may be differences in detail. The details may be left to the parties. There is the great difficulty; the difference in freight-cars and their reasonable con-

struction, and the different uses to which they are put makes the whole element one of difficulty. There are cattle-cars, grain-cars, coal-cars, and gondolas—all these are special cars for special freights, and have a special construction. Before a certain coupler is adopted a certain standard of car should be adopted. All these things should be adopted before the coupler is.

Senator REAGAN. If the Erie and Pennsylvania were to adopt the automatic coupler, would not that be a strong inducement for the other roads to do it?

Mr. BUCHHOLTZ. Undoubtedly.

The CHAIRMAN. The natural thing is for a uniform coupler throughout the country?

Mr. BUCHHOLTZ. Yes, sir.

The CHAIRMAN. Uniform on every road?

Mr. BUCHHOLTZ. Yes, sir.

Senator HISCOCK. So far as the automatic couplers and hand couplers are concerned in the matter of economy, taking into account the construction of the car and the coupling of them, which system is the more economical.

Mr. BUCHHOLTZ. The old system is more economical in the way of construction. These automatic couplers, I believe, amount to about \$25 or \$35 a car—about \$25 a car. The old method only cost about \$10 or \$15.

Senator HARRIS. When you take into account the liability of the company for damages for injuries done to persons, how does that affect the question of economy, in respect to the use of this improved style or the old style of couplers?

Mr. BUCHHOLTZ. I think any coupler that is better than the old one would be also more economical to the company in damages.

Senator BLAIR. You are not liable to a suit at law unless you are guilty of carelessness?

Mr. BUCHHOLTZ. Negligence.

Senator BLAIR. Do you consider it negligence to use the old-fashioned coupler?

Mr. BUCHHOLTZ. No, sir.

Senator HISCOCK. I understood you to say that the difference in expense between an automatic coupler and a hand coupler is about \$20 to a car?

Mr. BUCHHOLTZ. A little less; about \$15. Of course that depends largely upon what type you use.

Senator HISCOCK. I mean the most improved type.

Mr. BUCHHOLTZ. Between \$15 and \$18.

Senator HISCOCK. How many freight-cars have you that are not supplied with them?

Mr. BUCHHOLTZ. Seventy-four thousand yet which are not supplied.

The CHAIRMAN. I thought there was a greater difference in the cost of equipment; that it took between \$80 and \$90?

Mr. BUCHHOLTZ. That is with both the air-brake and coupler. They go hand in hand together. One necessitates the other.

Senator HARRIS. What do you say as to the safety and efficiency of air-brakes on freight-trains; do you think an air-brake equally as efficient as any other system of brake?

Mr. BUCHHOLTZ. The power brake; yes, sir—more so.

Senator HARRIS. I would like to ask Mr. Ely as to the efficiency of an air-brake on freight-trains.

Mr. ELY. We think it is very efficient. We have it on ten thousand

cars now. Of course we do not realize its efficiency and will not until most of the cars are equipped.

Senator HARRIS. The reason I asked the question is because we have testimony here introduced in the other direction.

STATEMENT OF W. C. BROWN.

The CHAIRMAN. Proceed, Mr. Brown, with your statement.

Mr. BROWN. I want to refer just a moment to the bill—I do not recall the number of it, but I think it is Senate bill No. 3692—which provides for the appointment of a commission by the President by and with the advice and consent of the Senate, and I will preface my remarks on that bill with the statement that the Chicago, Burlington and Quincy has not an engine, either passenger, freight, or switch engine, that is not now provided with a power brake.

Senator REAGAN. What is the power brake as distinguished from the old brake?

Mr. BROWN. It is a brake that in our case is the Westinghouse air-brake. I use the word "power" to distinguish it from the old hand-brake. Five thousand, in round numbers, of our freight-cars are equipped with air-brakes.

The CHAIRMAN. Freight-cars?

Mr. BROWN. Yes, sir. And about three thousand with Janney couplers. An appropriation of about \$400,000 has been made this year by our company for the purpose of equipment. That amount of money, we find, will equip six thousand six hundred and sixty-six freight-cars, and if it is possible for the manufacturing establishments to furnish the brakes and the couplers, they will be put on this year.

Senator BLAIR. Equipped with brakes and couplers both?

Mr. BROWN. Yes, sir.

The CHAIRMAN. Over six thousand?

Mr. BROWN. Yes, sir. The appropriation was over \$400,000, and in figuring up we found it would just equip six thousand six hundred and sixty-six cars, and that number was ordered. In my judgment, the effect of this bill, Senate No. 3692, if it should be passed as it stands, will serve to at once stop all advances in this direction. The Chicago, Burlington and Quincy could not afford to spend \$400,000 for something there was even a remote possibility this commission might upset. While I do not speak authoritatively on that subject, I think that the first effect would be to cancel our order for these improved couplers.

Senator HARRIS. Allow me to ask you if you think there should be any legislation whatever upon the general subject under discussion, and if so, state briefly what.

Mr. BROWN. I do not think that any legislation on this subject is necessary. I think that the only limit to the adoption of power brakes and the improved couplers will be the ability of the manufacturing establishments that are making these appliances to supply them. I question very much whether the Chicago, Burlington and Quincy will be able to get the appliances that we have already ordered. I do not know just how many we are behind—I think several thousand behind the orders now, and we find in our efforts to get them by crowding the manufacturing establishments which supply them that we are getting quite a percentage of poor material. That is always the result of crowding these manufacturing establishments with your orders.

It seems to me that there is another point in connection with any legis-

lation on this subject, and that is a practical matter. There are only about two or three establishments in this country which are engaged in the manufacture of these appliances.

Senator BARBOUR. Do you make these appliances in your own shops at all?

Mr. BROWN. No, sir.

Senator BLAIRE. Is not the fact that there is such uncertainty as to their work the reason why the American people are not ready to perform such work?

Mr. BROWN. I think not. It has been wonderfully stimulated in the last few years. There was nothing crystallized in this field until the break and coupler tests, which were inaugurated by the Master Car Builders' Association, the first one of which took place at Burlington, on our road, during the summer of 1886. It was unsatisfactory, and the following summer another one was made, each one lasting nineteen days, and present at those tests were representatives from all over this country and from abroad, and every air-brake and coupler that possessed any merit was thoroughly tested.

The CHAIRMAN. Are you familiar with the bill which provides for safety couplers or draw-bars? Is there anything in that that would stop your work or have that tendency?

Mr. BROWN. I am not; but it occurs to me that there is objection to that. One objection is the danger, if that law be passed and the railroad companies absolutely bound to comply with it under a penalty of very heavy fines, that the corporations owning these patents may increase the price of them as far as we have ordered our appliances; and another thing is that it is absolutely an unnecessary law from the fact that the railroads in self-defense are going to go faster than this law requires. Those which are not able to will be subject to a penalty because they can not do it. If they have not got the money they can not do it. There are a great many roads in the West that can not do it. They would have to pay the penalty or go bankrupt, or wait for an extension of time.

I want to say a word in regard to the appliances themselves. I have been for something more than twenty years intimately associated with that particular class of the service—that is, freight brakemen. I was on the Chicago, Burlington and Quincy when we first introduced the air-brake and Janney coupler.

The CHAIRMAN. As a brakeman?

Mr. BROWN. No, sir; as a train-master. It is my opinion, eliminating entirely the question of life and limb, that it is in the interest of economy for the railroads to adopt these appliances just simply in the immunity which they give them from damages to persons and property by accident.

The CHAIRMAN. How as to taking into account life and limb?

Mr. BROWN. I do not think that it can afford to do anything else.

The CHAIRMAN. As quickly as possible?

Mr. BROWN. Yes, sir.

The CHAIRMAN. What is your present position in the railroad company?

Mr. BROWN. I am superintendent in charge of the lines of the Chicago, Burlington and Quincy, in Iowa and Missouri. My headquarters are at Burlington, Iowa.

The CHAIRMAN. Have you any thing further to say?

Mr. BROWN. Nothing further unless there are some questions which I can answer.

The CHAIRMAN. You think it would be unwise to pass any of these bills?

Mr. BROWN. I do, sir.

The CHAIRMAN. Or enact any legislation, the purpose of which is to interfere with the freedom of the railroads to proceed with the equipment of their cars as their own judgment dictates?

Mr. BROWN. I think so; I think the first effect, and I know as a practical matter that that has been the effect, would be to measurably relieve the managers of railroads from the responsibility which they now have, because they could say "the Government has taken hold of it and there is no use in our further prosecuting it."

Senator HISCOCK. You do not approve of any law establishing a board of Government inspectors?

Mr. BROWN. I have not given that question much thought. As I listened to the suggestions and questions this morning it occurred to me that the most practical one and the one that would be best for both the roads and the people is the one suggested by Senator Harris, that the recommendations of the master car builders be adopted by the roads.

The CHAIRMAN. But not by Congress?

Mr. BROWN. No, sir.

The CHAIRMAN. Would you favor the enactment of a law requiring the railroads to accept suggestions of the Master Car Builders' Association?

Mr. BROWN. No, sir; I would oppose it on the ground that no legislation is necessary, assuming that some bill is going to be passed, and I think that is the practical solution of the question.

Senator HISCOCK. Take this question of a board of experts who are to make suggestions, to examine and educate Congress on that subject; what would be the effect of that upon the railroads in reference to their delaying their work, and delaying their improvements, to see whether they might not be antagonized by legislation?

Mr. BROWN. I think that would be the direct result to postpone and defer improvements of this kind, to retard progress.

Senator HISCOCK. The moment you had a supervisory board, or one which might exercise at least a moral influence over the question, it might result in individual enterprise waiting until the board decided.

Mr. BROWN. Yes, sir; there is another thing, that no board of that character, not constantly and intimately connected with the work of railroads, as our master car builders are, could be any thing like as thoroughly equipped for any thing of that kind as the committees of the Master Car Builders' Association are.

Senator BLAIRE. What would be the effect of a law providing that on and after a given date, in an action at law for damages by employes or other persons against a corporation, the failure of a railroad corporation to have provided its cars with automatic couplers and power brakes—of course with the best one or ones that are reasonably good—should be prima facie evidence of negligence on the part of the railroad corporation?

At 12 o'clock m. the committee took a recess until 2 p. m.

At the expiration of the recess the committee resumed its session.

The CHAIRMAN. You may proceed, Mr. Brown.

Mr. BROWN. I would like to have Senator Blair's question repeated.

Senator BLAIRE. It was to this effect. You have stated the objections to legislation, and one very forcible suggestion you made was in the form of fact, as I understood you to state, that the agitation of this

question in Congress had already disinclined roads that were proceeding to put on this coupler and make these improvements in the direction of safety to go further until they saw what was coming of this, and whether an expenditure would be found useless, and in the end they would be compelled to substitute something else than that which should be prescribed by law, and you thought it would be universally so, and the existing developments would be arrested by agitation.

Mr. BROWN. Yes, sir.

Senator BLAIR. And if there were a law passed you thought they would not be enterprising in devising ways and means for improvements, but would try to conform to law and put the responsibility upon us. I asked you how it would do to leave this process of improvement unfettered, but to require that in the case of the coupler, for instance, that an automatic system should be applied to all the cars within a prescribed time, say three years or five years, whatever is necessary and reasonable, and after we did to make the fact that such coupler was not used by a given road *prima facie* evidence, until rebutted, of negligence on the part of the corporation when an accident should occur and a suit for damages be brought for the injury to workmen or to other parties injured. That would then leave the roads free to pursue the adoption of means of safety in their own way, which was best for their interest, for the necessary length of time to make the changes, and after that if they had not made the changes, then they would be guilty of negligence as a conclusion of law.

Mr. BROWN. I think it might in fact hurry the adoption of these devices to some extent. Still I think it would be a very oppressive law, one that might be applied to a great many other things. For instance, there are interlocking devices, which if used will prevent collisions at crossings where one road crosses another at grade. There are interlocking block-signals which will prevent, if they are used, rear end collisions. There are a great many inventions of this kind, and it goes without saying that it is absolutely impossible for railroad companies to adopt all of them at once.

If these bills should become laws it means that a great many of these inventions, which are necessary and which are being pushed forward in connection with others, will all have to be dropped and the couplers and the air-brakes be given precedence over everything else. So far as life and limb of employes are concerned, they may and perhaps would take precedence. In so far as the safety of passengers and the general public is concerned there are other inventions which are equally important as these. For instance, in Chicago it has become a necessity and all the roads are moving in the direction of elevating their tracks, or depressing, I should say—elevating the streets and making viaducts or depressing their tracks, going down under. Whatever they decide on will cost a very large amount of money. Our company in Illinois alone is now contemplating the expenditure of between one and two hundred thousand dollars in other safety appliances, which in the judgment of the management are just as necessary as the air-brakes and the couplers, and my thought was if this law which you suggest should be enacted that it would form a precedent for making the non-use of a great many other things *prima facie* evidence of negligence and would be burdensome and unjust to the railroads.

At 2.30 o'clock p. m. the committee adjourned until to-morrow at 10 o'clock a. m.

WASHINGTON, D. C., *May 15, 1890.*

The committee met at 10 o'clock a. m. pursuant to adjournment.

STATEMENT OF W. C. BROWN—Continued.

The CHAIRMAN. Are there any facts which you wish to get before the committee or any views you wish to express?

Mr. BROWN. Yes, sir; there are one or two thoughts on the general subject.

I stated in reply to a question that I thought this class of legislation was unnecessary, and I think as a practical matter it is unwise. I think it is unnecessary because all the roads of the country are moving in the direction sought by these bills as rapidly without legislation as it will be possible for them to move in pursuance of legislation.

I think the fact that the railroads of this country are so far in advance of the railroads of other countries in the improvements which have been made in the service, in the adoption of safety appliances of all kinds, is to a very great extent attributable to the fact that the management of the roads of this country have felt the responsibility resting on them of investigating the different inventions and adopting them as fast as they were proven to be successful and they could raise the money to do it.

I think it is a fact which no person who is familiar with this subject will dare to deny that the roads in other countries where they are either owned by the Government or controlled by the Government to a very much greater extent than in this country are very much behind the roads in this country. My reason for saying that in my judgment this class of legislation would be unwise is this, that the moment the Government steps in and attempts to go into the details of the management of our railroads, as does this bill, that that is the opening door to that class of legislation. It seems to me that the moment the responsibility to some extent would be lifted from the railroads, the management of the railroads, and there will be this distribution of responsibility whenever an improvement is suggested and the question is agitated, the reply will at once suggest itself to the management that the Government has taken hold of it. "Even if we should take hold of it they may step in and suggest something else or pass a law compelling us to do something else."

The CHAIRMAN. So that in your judgment, to sum it all up, you think such legislation is unwise, looking to the question of the progress of the railroads in bringing about what the bills on their face seek; that there is danger that it would retard rather than hasten the improvements that we are trying to secure the adoption of to-day by legislation.

Mr. BROWN. Yes, sir. I do not think there is any doubt about it. It seems to me that those who are familiar with the progress which has been made in this country without legislation should recognize that and give the roads credit for the probability that they will continue to make progress in improvements, inventions, that are already devised and those which shall be in the future.

The CHAIRMAN. Now, Mr. Brown, the Pennsylvania Railroad people stated that they had about one-tenth of their freight-cars improved, so as to comply with this proposed legislation. The Erie people stated

they had six thousand out of forty thousand, and then the Chicago, Burlington and Quincy—what per cent. was yours?

Mr. BROWN. At the close of the year 1890 we will have 25 per cent. of our entire equipment. Understand me that every engine we have now is equipped in compliance with this proposed law.

The CHAIRMAN. As to the air-brake?

Mr. BROWN. Yes, sir; and 25 per cent. of our entire equipment at the close of the year 1890, if we can get the material. Our orders were placed early this year. We will have 25 per cent. of our cars equipped. I wish to make the same explanation that the Pennsylvania people did, that so far as the Chicago, Burlington and Quincy is concerned we are out of the question entirely.

The CHAIRMAN. You can do what is required?

Mr. BROWN. We will anticipate every requirement of these bills. We will have complied with every requirement of these bills before the date fixed in the bill.

The CHAIRMAN. Now, what I want to get at is this, just what proportion of the railroad cars of the country—there are about a million cars—what proportion of those cars are now adopting and have adopted this improved method or these improved appliances. Have you any idea?

Mr. BROWN. Any reply that I would make to that would necessarily be guess-work.

The CHAIRMAN. What other road, do you know of any except those which have been represented here, and which have been spoken of, is doing anything?

Mr. BROWN. Yes, sir; the Atchison, Topeka and Santa Fé have a larger proportion of their cars equipped with the brakes and couplers than either the Pennsylvania or the Chicago, Burlington and Quincy.

The CHAIRMAN. A larger proportion.

Mr. BROWN. Yes, sir; the Union Pacific and Central Pacific have a large number. I would not attempt to give the percentage of their equipment. They have a very large number. The Northwestern has a great many, and their general superintendent, Mr. Whitman, says that they are putting them on just as fast as they can get the material.

Senator WILSON. Have the companies any system for the collection of statistics in respect to the application of these improvements and appliances by the different roads of the country?

Mr. BROWN. Yes, sir; there has been in existence for some nineteen years an association called the Master Car Builders' Association, which meets every year. They have for five or six years had this particular subject under consideration. Four years ago a committee consisting of the most able members of that association, representing roads in the Eastern, Middle, and Western States, was appointed to take this matter up. Perhaps the Senator is familiar with it; at any rate he has heard of the two brake tests which were held near Burlington.

Senator WILSON. Yes, sir.

Mr. BROWN. Those brake tests and coupler tests occupied some nineteen days in 1886 and 1887, and were for the express purpose of testing the different devices in the way of safety couplers and power brakes. The committee to which I refer—I do not know that it is necessary to give the names, but they represented—

The CHAIRMAN. Are they permanently appointed or changed from year to year?

Mr. BROWN. This committee concluded its work in 1887, reported in favor of the type of coupler which the Pennsylvania, the Chicago, Bur-

lington and Quincy, the Chicago and Northwestern, the Atchison, Topeka and Santa Fé, the Southern Pacific, and the Union Pacific have since been putting in use.

The CHAIRMAN. They all adopted the recommendation of the committee of the master car-builders?

Mr. BROWN. Yes, sir.

Mr. WILSON. What is the date of the last report of that association?

Mr. BROWN. I think it was June of last year. They have not yet had their annual meeting this year.

Senator WILSON. Does that report give the percentage of cars on the different roads in the country to which these appliances have been applied?

Mr. BROWN. I think it does. I know that when this question was up it was gone into carefully. This committee of eight reported in favor of the Janney type of coupler—not the Janney coupler, but simply that type. It is a vertical hook-coupler. The report was received by the association and referred to the various roads in interest with the request that they vote by what was called letter-ballot, each road having a certain representation based on one vote for every one thousand freight-cars operated by that road.

The ballots were counted in New York on the 13th of October, 1887, and there were in the neighborhood of half a million cars represented at that time. That was three years ago this coming October. Four hundred and seventy-four votes were in favor of the adoption of this coupler and one hundred and ninety-four votes were against it. The coupler of that action was recommended for adoption by the roads, and the work has been going on. I think it is safe to say that the only limit has been the capacity of the manufacturing establishments to get out the work. They are way behind in our orders to-day.

Senator WILSON. Can you state the proportion of roads that have adopted it; that is, practically adopted it?

Mr. BROWN. No, sir.

Senator WILSON. By attaching it to their cars?

Mr. BROWN. I can not state it definitely; but I should say a majority.

Senator BLAIR. What proportion of the transportation of the country is done in such cars?

Mr. BROWN. I can not say. But the Chicago, Burlington and Quincy is, as you know, one of the great transcontinental lines, and I think I am safe in saying that fully one-half of our freight-trains now have enough power brakes, Westinghouse air-brakes, to control the movement of those trains without any assistance from the brakemen. We have frequently solid trains of twenty-five and thirty cars, on every single car of which is an air-brake.

Senator BLAIR. Do you put the coupler wherever you put the brake?

Mr. BROWN. Yes, sir.

Senator BLAIR. Those two go together with you?

Mr. BROWN. Yes, sir.

Senator BLAIR. You do not separate the coupler from the brake?

Mr. BROWN. No, sir.

Senator BLAIR. How does it happen in this movement the coupler and brake are separated?

Mr. BROWN. Because the coupler as compared to the brake is a new thing.

Senator BLAIR. And has a more direct bearing upon the matter of safety than the brake. In other words, which conduces more to the safety of operating the train—the new coupler or the new power brake?

Mr. BROWN. In reply to that I should say that so far as the prevention of accidents to the trains, collisions, and that class of accidents—

Senator BLAIR. Those things which involve human life and limb is what I have reference to.

Mr. BROWN. In preventing accidents to brakemen or pinched hands and accidents of that kind—

The CHAIRMAN. The coupler is the more important?

Mr. BROWN. The coupler is the more important.

Senator BLAIR. To human life regardless of whether it be a brake or something else.

Mr. BROWN. I think the brake is more important.

Senator BLAIR. These two ideas are cognate and go together?

Mr. BROWN. Yes, sir; I think the one should go with the other.

Senator BLAIR. You treat them as such in your dealing with the problem?

Mr. BROWN. Yes, sir; and further, the brake can not be used on a long train, of thirty-five to fifty cars, without the coupler.

Senator BLAIR. Can not be used?

Mr. BROWN. No, sir.

Senator BLAIR. The coupler can be used without the brake?

Mr. BROWN. The coupler can be used without the brake; but the brake can not be used without the coupler.

Senator BLAIR. Can you explain in a moment why that is so on a long train and is not so on a short train?

Mr. BROWN. The brake is applied at the front of the train, and with six inches of slack between each of the cars when that brake is applied to the front end it would derail the cars at the rear end of that train when that slack comes together.

Senator BLAIR. How many feet would that be? It would depend upon the length of the train; six inches to the car?

Mr. BROWN. Yes, sir; I think that is a fair average.

We have had that applied a number of times. At the test at Burlington we have had cars thrown off the track. The force sheared the king-bolt. We had cars loaded with car-wheels, and the car-wheels went right through the cars when the stop was made.

Senator BLAIR. Then the brake does not apply its power instantly to every car the entire length of the train?

Mr. BROWN. It is impossible. They have made improvements so that it more nearly approximates that than it ever has before, but still it has not reached perfection yet.

Senator BLAIR. There is no such thing as an electric application, or the application of electricity to brake the trains?

Mr. BROWN. None that I think is practicable. There is such a device, but it is a very intricate, complicated affair, and I do not think it would be practicable.

The CHAIRMAN. I think some one testified before the committee here that where these couplers and brakes, or one of them at least, were used on freight trains that they still had to retain their brakemen, just as usual, on the freight-cars in running trains. Is that so with your road, in your experience?

Mr. BROWN. That is true. There are several reasons for that. There is always more or less work to do. If there is any switching to do; if it is necessary to side-track to get out of the way of other trains; if a car breaks down or an accident of any character happens that detains the train, it is necessary to send a flagman back to warn the train and stop it, so as to prevent rear end collisions. There are frequent cases of hot

boxes that have to be packed, and I think it is always necessary to keep three men on the freight-trains, which we have.

Senator WILSON. I suppose there might occasionally be an accident to the brake itself?

Mr. BROWN. Yes, sir.

The CHAIRMAN. Here is a freight-train with thirty cars. Under the old system, without the air-brakes at all, as I understand it, how many brakemen would you have on a train of thirty cars?

Mr. BROWN. A conductor and two brakemen.

The CHAIRMAN. On that length of train?

Mr. BROWN. Yes, sir.

The CHAIRMAN. Now you have the same number still?

Mr. BROWN. Yes, sir.

The CHAIRMAN. And you would have the same number if the train were shorter—half the number of cars?

Mr. BROWN. Yes, sir.

The CHAIRMAN. So that you are saving no labor by the adoption of the new appliances?

Mr. BROWN. Nothing at all.

Senator WILSON. That is an equipment in the matter of force that is induced by the possibilities of what may happen to a train whether it is equipped with these improvements or not?

Mr. BROWN. Yes, sir.

Senator BLAIR. Is there any inconvenience or increased or lessened danger resulting from the combination of cars, some with the old coupling and others with the new coupling, in the same train. Can you use the old and the new method of coupling on the same train?

Mr. BROWN. Yes, sir; we do it right along.

Senator BLAIR. And with no difficulty?

Mr. BROWN. I do not think it increases the danger materially; I should say not.

Senator BLAIR. Is there anything in this direction—that having two systems tends to lessen the degree of skill on the part of the brakemen in the management of trains; say, for instance, the old coupling by stepping in between the cars, their skill must be the result of continuous practice, I should think. Now, introducing or mixing the two systems, do you find the brakemen just as skillful and efficient and as liable to protect themselves from danger as they were formerly when you had only the old method?

Mr. BROWN. I think it has made no difference. We have had less men hurt, because, as the new appliances are adopted, there is less danger. There is no necessity of going over the tops of trains or between cars.

Senator BLAIR. Speaking of the tops of trains, there has been a brakeman here who described very vividly the dangers resulting from the shape of the top of the car, especially when there is sleet, it becoming very slippery, and the necessity of traveling upon the tops of the cars dark nights. Could there be nothing done to provide a more secure passage across the top of the train? It slopes both ways, and it is like a man on the roof of a house.

Mr. BROWN. The slope is slight, and there is a running board which is perfectly flat along the center of the car, and I do not think that anything could be done in that direction.

Senator BLAIR. What real objection is there to changing the height of bridges, so that a man might pass along on the top of a train without having his head knocked off?

Mr. BROWN. I do not know. Under the Burlington system there has not been a man hurt that way.

Senator BLAIR. Ought not that to be universally so? Why should railroads build their bridges so low? There would be a less expense if they built them so that that danger would disappear.

Mr. BROWN. In some cases that might be true. Where one road crosses another if you raised it, it would involve raising it on both sides. I have known cases where it would be——

Senator BLAIR. Those would be very few and far between. You have not such a case on your road?

Mr. BROWN. No, sir.

Senator BLAIR. How long is your road?

Mr. BROWN. About 7,000 miles.

The CHAIRMAN. You will have when you get to elevating and lowering your road in cities.

Mr. BROWN. That may be. Still that danger will be obviated to a very great extent when the power brakes are used.

Senator BLAIR. Then that is an additional reason for its adoption?

Mr. BROWN. Yes, sir.

Senator BLAIR. In the direction of expense to them?

Mr. BROWN. Yes, sir.

The CHAIRMAN. Let me ask you another question. You have been closely identified with the employes of railroads, brakemen, etc. What is the feeling among the men employed with reference to this subject?

Mr. BROWN. I know they are all very anxious to see that these improvements are made. It not only gives immunity from danger, but it reduces to a minimum the work connected with the position of conductor or brakeman.

The CHAIRMAN. Is it their judgment that legislation ought to be enacted on the subject?

Mr. BROWN. I have not heard an opinion expressed except in regard to these bills which contemplate the establishment of a commission to investigate the matter, which in their judgment had been thoroughly investigated by the master car-builders.

The CHAIRMAN. There is no use of that?

Mr. BROWN. It is the judgment of all that that would have a tendency to retard rather than expedite the adoption of the improvements.

STATEMENT OF J. E. LOUGHRIDGE.

Mr. LOUGHRIDGE. Mr. Chairman and gentlemen of the committee: After listening to the very intelligent arguments of yesterday and to-day, made by some of the most distinguished and representative railway men of our country, I confess to a very considerable embarrassment in attempting to define my status before you. I asked the privilege of appearing before you as the representative of the Loughbridge Brake and Car Company, of Philadelphia. To-day I beg that I may be received as a representative of the large army of unorganized, unrecognized—I might say unappreciated—inventors, and my brief remarks will be in the direction of an appeal to you to avoid in the legislation proposed anything in favor of special devices. I was accorded the privilege of appearing before the House committee on April 21 in regard to House bill No. 6950, presented by Hon. R. P. Flower. This bill, in its enacting clause, openly and unqualifiedly de-

clares in favor of mandatory legislation compelling railroads to equip their cars with automatic air-brakes.

The CHAIRMAN. What bill do you refer to?

Mr. LOUGHRIDGE. The bill presented in the House by Mr. Flower. I apprehended that bill was before you to-day, but I find it is not. As this bill is not now before your committee, I want to ask your critical attention to the bill before you presented by Senator Allison, and ask you if this bill, which is identical with House bill 9682, presented by Mr. Henderson, does not make automatic brakes as compulsory as does the Flower bill?

This bill presented by Senator Allison in section 4 says:

SEC. 4. That it shall be unlawful for any corporation, company, or person operating a line of railroad in the work of interstate commerce to run any train in such work after the 1st day of January, 1893, that shall not have enough cars in such train equipped with some kind of power or automatic brake, so that the engineer upon the locomotive can control the train, as passenger-trains are now controlled by the engineer, without requiring brakemen to go between the ends or on top of the cars to use, as now, the common hand-brake.

I will say right here that the expression "some kind of power or automatic brake" would probably be construed to mean any power brake, automatic or non-automatic, if left without constructive comment as in bill No. 3692. Bill No. 9682 construes the intent and purposes of the bill to be—and I quote the words: "To make automatic brakes compulsory," when in section 5, lines 17 and 18, it states, "or from a lack of such proper and efficient automatic brakes as contemplated in this act"—not power brakes, or power and automatic brakes, but automatic brakes *per se*—and mark the words, "as contemplated in this act."

Again, in section 7, lines 5 and 6, "with such automatic safety appliances as contemplated in this act." In lines 9 and 10, "with such automatic safety appliances as will work," etc.

Now, I know that the parentage of this bill is due to Mr. Coffin, and I am as confident as I am of anything that Mr. Coffin had no intention whatever to give any prestige or favor to any one particular appliance. His association has been with automatic brakes, and the wording and the contemplation expressed in the bill was perfectly innocent on his part, I am sure, for I want to take the liberty of saying that every brakeman, employé, and manager in this country that I know of is perfectly willing to trust the matter to Mr. Coffin as far as fair treatment goes.

Now, gentlemen, what I may have to say further will be mainly in relation to power brakes. I am very glad to note that all the railroad gentlemen here treat the matter, Mr. Brown particularly, as power brakes.

The CHAIRMAN. What is the difference between a power brake and an automatic brake?

Mr. LOUGHRIDGE. An automatic brake is a power brake, but a power brake is not an automatic brake.

In order that I may have the confident hearing of this committee, I beg to make the personal allusion that I aided in the equipment of the first train of cars with power brakes, where adoption of the system almost immediately followed. That was in 1856 on the Pennsylvania Railroad, which then, as now, is always the pioneer in practical safety appliances. This was then known as the Loughridge (my father) chain brake. I think every passenger-car on the Pennsylvania Railroad was at one time equipped with this system, and I can not avoid here alluding to the fact that a material element of that invention to-day obtains on all their freight-cars in breaking from truck to truck by hand-brakes.

Just here it would be probably pertinent for me to try to emphasize some of the remarks of several of the gentlemen made yesterday, par-

ticularly Mr. Brown, in regard to the possible early development of systems now conceded as not perfect.

I have been identified with brakes from 1856 up to the present time, almost immediately connected with the development of brakes. Since that time the Pennsylvania Railroad Company has adopted three different systems, and have gone to the expense of three different equipments; first, the old chain brake, the Loughridge brake, which was succeeded by the better straight air-brake of the Westinghouse Company. The whole road is equipped with that brake. When in the fullness of time the automatic brake was invented the Pennsylvania road just threw off their equipment of straight air and put on the automatic, believing it to be better. In a very short time there have been three different appliances at a very heavy expense. As a brake expert, which I am called, I believe, at home, I know that the legislation which has been proposed here, that the agitation that has resulted from these proposed bills has awakened inventions, and I have had within the last ten days in Philadelphia certainly half a dozen inventors come to me as a brake expert with brakes, automatic and non-automatic, some patented and some in the course of investigation. At the same time I have had a great many couplers presented to me.

I wish to remark right here that even should no bill be passed and become a law, you can rest assured that the agitation which has occurred has greatly stimulated invention, not only in brakes but in couplers. I do not think I ever saw so many applications. Patent agents in Philadelphia with whom I am familiar tell me that they have never in their experience had so many applications for couplers and brakes as they have had within the last three or four months.

The CHAIRMAN. We have done some good then, if we have not gone any further.

Mr. LOUGHRIDGE. We understand that the object of this bill is to enforce by national legislation the early adoption by railroads of such appliances as will give greater security and protection to the lives and limbs of trainmen. In this direction the automatic coupler is perhaps essential, as its adoption will, or should, by its automatic action, relieve trainmen from going between cars during the act of coupling and uncoupling. The automatic functions of car-couplers are so plain and so readily appreciated in their relation to protection to trainmen, that we believe a very great number of people unskilled in the handling of trains assume that the same protective functions attach to automatic air-brakes. Such, however, is not the case. There is nothing in the automatic feature of air-brakes that can be claimed as a protection to trainmen, as compared with other systems of continuous power brakes. On the contrary, the complications of the automatic air-brake system are such as require trainmen to perform very dangerous duties, similar to those which the automatic coupler seeks to avoid, namely, to go between the cars and under the buffers to couple or uncouple the air-brake hose, and in switching in or out cars the trainmen must crawl under the buffer or stand between the cars and reach over the buffer to close the cocks. Besides this, it is daily necessary for trainmen to go under the cars to either bleed the reservoirs or adjust the cock at or near the triple valve, and there can be no question that these requirements would injure more men than the system as a whole would protect.

We do not propose, without your request, to go into the mechanical details of the automatic air-brake system to confirm by mechanical demonstration our statements, or to compare it with other systems now in use or seeking the patronage of railway managers, but as national

legislators we ask your most careful consideration of the following points:

(1) The final passage of either bill as presented would be special legislation in compelling railroads to adopt one system of brakes which might or might not be desirable for general freight service; a system that might be available for roads of ordinary gradients and be utterly impracticable for roads of heavy grades.

(2) It would compel roads now using more satisfactory systems of continuous power brakes to go to heavy expense in change of equipment.

(3) It would compel the use of a system practically controlled by patents in the hands of one company, and would be direct legislation in favor of a monopoly.

(4) It would compel railway companies to pay any cost of equipment that such monopoly might demand.

(5) It would enable railway companies to plead such legislation in bar to any claim for damages that might be traceable to the inherent defects in the system of brakes.

(6) It would be a declaration to all inventors to stop any further effort in electric, momentum, or other brake motor experiments, for the reason that the compulsory legislation once enacted could not be readily repealed.

(7) It would limit any improvement to a very narrow circle, and that practically covered by patents granted to and absorbed by one agency.

We submit that the passage of such a bill as named would not only be special and mandatory in character, but would make compulsory the adoption of special appliances, which the Master Car Builders' and Master Mechanics' Railway Associations of the United States not only refused to indorse, but refused to recommend. The Master Car Builders' Association recommended the adoption of the Janney type of coupler, and it was confirmed by letter-ballot. Would it be legal or just for Congress to pass a law making the adoption of the Janney type coupler compulsory, and thereby wipe out the competition of the hundreds of other, and, perhaps, better automatic couplers now in use in experimental trial, or by adoption?

We ask, gentlemen, in full view of the object sought to be obtained by the proposed legislation, what possible advantage can be achieved by the use of the word "automatic" in connection with brakes in any of the bills before you? An automatic brake is necessarily a power brake, but a power brake is not necessarily an automatic brake. Under the phraseology of "continuous power brakes," or even "power brakes," the automatic system would have as full opportunity for demonstrating its availability as it would under the special mention in each of the bills before you.

We submit to you, gentlemen, that the use of the word "automatic" in any way in connection with brakes in the proposed legislation would be giving at least a prestige to a special appliance that is not warranted by any superior mechanical advantages attaching to the method.

Senator BLAIR. May I ask you right there a question?

Mr. LOUGHRIDGE. Yes, sir; certainly.

Senator BLAIR. "Brake" is the generic term?

Mr. LOUGHRIDGE. Yes, sir.

Senator BLAIR. Power brakes and hand-brakes. What is the subdivision; what is automatic, that is, a power brake?

Mr. LOUGHRIDGE. Yes, sir.

Senator BLAIR. Not a hand-brake?

Mr. LOUGHRIDGE. No, sir; it is a continuous power brake.

Senator BLAIR. What are the other divisions of power brakes?

Mr. LOUGHRIDGE. Automatic air-brake and automatic vacuum-brake.

Senator BLAIR. An automatic air-power brake?

Mr. LOUGHRIDGE. An automatic air-power brake; the Westinghouse. The brake that has been alluded to in all the conversation here is an automatic air-brake. It is a power brake. It is an automatic air-power brake, or an automatic air continuous power brake.

Senator BLAIR. Any automatic power brake is not operated by hand?

Mr. LOUGHRIDGE. It is operated by the engineer.

Senator BLAIR. It is not operated by the hand of the brakeman?

Mr. LOUGHRIDGE. No, sir.

Senator BLAIR. The hand-brake is confined to the single car and operated by some one on that single car?

Mr. LOUGHRIDGE. Yes, sir; with the wheel of the windlass at the other end of the car. The power brake is a brake operated by the engineer by the force of some elastic fluid or vacuum, or whatever you choose to call it. There are a number of appliances under the head of electric, momentum, and automatic, all of which would come under the head of continuous power brakes.

Senator BLAIR. What way has the engineer of operating this power brake except the automatic?

Mr. LOUGHRIDGE. He would operate it by straight air. As a great many trains are on heavy grades it would just be the reversal of the heavy system. The engineer in applying the heavy brake exhausts the air from his pipe and performs an automatic connection between the triple valve and the cylinder. In the straight air the engineer carries his air condensed in the reservoir on the engine.

Senator BLAIR. That is condensed air?

Mr. LOUGHRIDGE. Yes, sir; straight air.

Senator BLAIR. It shoots a column of air the length of the train which applies the brake?

Mr. LOUGHRIDGE. Yes, sir.

Senator BLAIR. In the other case the atmospheric pressure fills the vacuum?

Mr. LOUGHRIDGE. Yes, sir; it creates a pressure upon the heads of the cylinders.

Senator BLAIR. How does he create a vacuum?

Mr. LOUGHRIDGE. By an injector, an injector of steam, which draws the air from the pipe, exhausting the air through the pipe.

Senator BLAIR. That vacuum is continuous and constant, and when you apply the brake there is a valve lifted and the air rushes into the vacuum.

Mr. LOUGHRIDGE. In the automatic vacuum there are various devices, the ball valve and the pipe valve, and a number of devices in the automatic.

Senator BLAIR. The most general division, to give us an idea of the meaning of those terms, is the hand-brake, which is operated singly on the cars by the brakeman or the individual, and the other operated by the engineer; that is the power brake.

Mr. LOUGHRIDGE. Yes, sir.

Senator BLAIR. The power is divided into automatic and various other forms?

Mr. LOUGHRIDGE. Yes, sir. The power brake would take in electricity, atmospheric combinations, the vacuum, straight air, chain

brakes, and a number of others. I think in England they have five or six kinds of brakes in operation under the head of continuous power brakes.

Senator BLAIR. The automatic power brake, as I understand you, is one which operates by the creation of a vacuum?

Mr. LOUGHRIDGE. No, sir; it does not act by the creation of a vacuum. It operates by storing the air under each particular car, in a reservoir under each particular car. That is held trapped in that reservoir by means of what is known as the triple valve. When they get a storage power of 70 pounds in this reservoir, or these auxiliary reservoirs, as they are termed, under each car, an equilibrium forms between the pipe and the reservoir. This triple valve closes and holds the air in the reservoir.

Senator BLAIR. Is it condensed?

Mr. LOUGHRIDGE. It is compressed to 70 pounds to the square inch. That is the normal condition of it. When the engineer wants to apply his brake by the automatic method he exhausts, say, 10 pounds of air from this drain pipe at his engine. That pipe is at his engine. When that reduction occurs in the pipe the triple valve opens the communication automatically between the reservoir and the cylinder, and it is the piston in the cylinder which actuates the brakes. When this reduction takes place and this triple valve opens between the reservoir and cylinder, the brakes go on just in proportion to the pressure that is in the reservoir, or the pressure that has been reduced in the drain pipe. That can be reduced from 10, 15, 20 up to—well, about 20 pounds, which is all that is required to get the pressure.

The CHAIRMAN. I understand that you are opposed to these bills. Are you opposed to any legislation on the subject? And if not, state for what you are here.

Mr. LOUGHRIDGE. I am here to criticise the special legislation contained in that bill presented by Mr. Allison giving a prestige to, at least, if it does not make automatic brakes mandatory.

The CHAIRMAN. You want the word "automatic" stricken out wherever it occurs?

Mr. LOUGHRIDGE. I think it is a fair request for all future inventions, because it does not condemn or criticise any other brake. You have heard gentlemen speak here of power brakes altogether; but automatic means a special appliance now in force and under the control of one agency.

Senator WILSON. If the bill were amended in that respect as you suggest, would you then be in favor of the enactment of this bill into a law?

Mr. LOUGHRIDGE. Yes, sir.

Senator BLAIR. How about the automatic coupler?

Mr. LOUGHRIDGE. A coupler must be automatic. There is where I fear you gentlemen get the two mixed: The functions are entirely different, but a coupler must necessarily be automatic to accomplish what it is intended to do.

Senator WILSON. That is, a coupler which acts by itself and closes upon two cars coming together?

Mr. LOUGHRIDGE. Yes, sir.

The CHAIRMAN. You come here simply as an inventor, and all you desire is that whatever legislation is enacted shall be so construed as that it shall not definitely settle the character of the brake which shall be adopted. The coupler, as I understand, you do not make any question about?

Mr. LOUGHRIDGE. No, sir.

The CHAIRMAN. That is what you are after?

Mr. LOUGHRIDGE. Yes, sir; that is it exactly. There are thousands and thousands of automatic couplers. The Janney type takes in I do not know how many. Mr. Brown could probably tell you—fifty or one hundred of that particular type.

Senator BLAIR. What is the idea of the Janney type?

Mr. LOUGHRIDGE. It is a vertical plane type, a hook.

Mr. Chairman, you expressed fully and clearly my object in being here, and all I ask is that we inventors have a fair chance, and not be handicapped by legislation.

The CHAIRMAN. You are not particularly concerned as an individual whether a bill is passed or not; but if one is passed, you do not want to confine it to any special patent or appliance?

Mr. LOUGHRIDGE. Yes, sir; that is it.

ADDITIONAL STATEMENT OF L. S. COFFIN.

Mr. COFFIN. Mr. Chairman, in the first place, I desire to place myself in my proper position before you, and I wish to introduce, first, this letter, which I will read:

BROTHERHOOD OF RAILROAD BRAKEMEN,
OFFICE OF THE GRAND SECRETARY AND TREASURER,
Galesburgh, Ill., U. S. A., December 23, 1889.

My DEAR FRIEND: You are hereby authorized to represent the Brotherhood of Railroad Trainmen in all matters pertaining to power breaks, automatic couplers, and other safety appliances, also Sunday rest.

Most respectfully,

[SEAL.]

S. E. WILKINSON,
Grand Master.
W. A. SHEHAN,
Grand Secretary and Treasurer.

Hon. L. S. COFFIN,
Brooklyn, N. Y.

Last night I received this letter [exhibiting]. The letter will explain itself. Here is the seal of the lodge. Here are the names of these grand officers [exhibiting].

GRAND LODGE OF THE BROTHERHOOD OF RAILROAD TRAINMEN.

OFFICE OF GRAND SECRETARY AND TREASURER,
Galesburg, Ill., May 12, 1890.

Hon. L. S. COFFIN,
Washington, D. C.:

DEAR SIR: We have carefully examined H. R. 9682 and are convinced that it fully covers the ground and if made a law will have the effect of saving the lives of thousands of trainmen.

I hope the committee will understand that I am now voicing the men who handle these cars.

The CHAIRMAN. What bill do you refer to? Senator Allison's bill?

Mr. COFFIN. Yes, sir; Senator Allison's bill.

The CHAIRMAN. What is the number of the bill?

Mr. COFFIN. The number given in the letter is the House number, but the House bill is identically the same as Senator Allison's bill. The letter further proceeds:

The provisions of the bill are thoroughly practical, and we hope to see it pass both branches of the national legislature without any amendment whatever. The

Brotherhood of Railroad Trainmen, of which we are the chief officers, embraces a membership of nearly twenty thousand practical railroad men in actual train service, and on their behalf we earnestly request you to do all in your power in favor of this measure.

Sincerely yours,

[SEAL.]

S. E. WILKINSON,
Grand Master.

W. A. SHEAHAN,
Grand Secretary and Treasurer.

Now, there is the voice of the trainmen, and let me say that probably in the next ten days there will be petitions sent in here not only from these twenty thousand men, but probably twice that number of trainmen and brakemen who are outside of the order.

I have a letter from the secretary saying that blank petitions have been sent out to every lodge in this nation, and will be largely signed and sent in here, praying that the provisions of this bill be enacted into a law. I desire to say, before I read this letter, and also another letter which I have, that not only are the brakemen interested in this matter, but every man on the train is deeply interested in it, and, as my friend Mr. Brown knows, many a grand engineer has ridden on to his death because instead of putting his hand on that triple valve instantly he had to be calling and calling for brakes, for the boys to come out of the caboose and run over the slippery cars and set them—I say many a grand fireman and engineer has ridden on to his death just because of the lack of these power brakes on these cars.

I hold in my hand a letter from the grand secretary of the Grand Lodge of the Locomotive Firemen of this organization. I do not know as I need to read it all, but I will give a copy of it to the stenographer. He says that he expresses the sentiment of every one of the eighteen thousand members of the order, asking that this bill—this same bill that I referred to, Senator Allison's bill—be enacted into a law.

The letter is as follows:

GRAND LODGE BROTHERHOOD OF LOCOMOTIVE FIREMEN,
Terre Haute, Ind., May 5, 1890.

DEAR SIR: Absence from the city has belated my answer to your favors of the 25th and 30th ultimo, the contents of which I have carefully noted.

Referring to H. R. 9682, introduced into the House of Representatives by Mr. Henderson, of Iowa, I beg to say, after a careful perusal of its provisions, that I fully indorse the measure and hope it may become a law at the earliest practicable moment, and I have no doubt I voice the sentiments of each and every one of the eighteen thousand members of our organization upon that proposition.

We are profoundly interested in such legislation as proposed by the adoption of safety appliances to protect railway trainmen in the discharge of their hazardous duties, and as the measure in question, if enacted as a law, would be fruitful of incalculable benefits, we heartily favor its adoption, and shall give it all the support in our power.

Yours, very truly,

EUGENE V. DEBS.

Hon. L. S. COFFIN,
Washington, D. C.

Mr. COFFIN. But that is not all. Yesterday the gentlemen, I think, on the Pennsylvania Road, paid a very high compliment to the Brotherhood of Locomotive Engineers. I have in my hand a letter signed by Messrs. Arthur, Ingraham, Everett, and Hays, grand officers of that grand order of men, asking for this same thing. If you desire it I will read the letter. It is just the same exactly as those I have read; not authorizing me, as the brakeman did, to act for them in everything, but asking that this bill which they have carefully read and consulted over

shall be enacted into law. Not only do they say "we will give it our personal encouragement and efforts," but they further say—

Not only this, but we will venture even to break an established custom adopted here, and place our names on the margin of this letter as an indorsement of your efforts in the behalf of employes in the train service. May you succeed in your laudable efforts, and may the Representatives in Congress give, as the true representatives of the labor element of this country, a measure that must prove a relief and benefit to the railway servants as well as the public.

The expressions in this I might read where they say the provisions in that bill—they use about the same language as the brakemen did—are eminently practicable, and must be acceptable not only to railroad managers but to the public at large and the railroad employes.

The letter is as follows :

OFFICE OF THE GRAND INTERNATIONAL
BROTHERHOOD OF LOCOMOTIVE ENGINEERS,
Room 5, Blackstone Block, Seneca street, Cleveland, Ohio, May 3, 1890.

MY DEAR SIR: I am in receipt of your esteemed favors of the 25th and 30th ultimo, with H. R. bill 9682 inclosed. Messrs. Arthur, Ingraham, Everett, and I myself, after a careful perusal of the same, desire to say we are heartily in accord with you in this movement and the principles of the bill. We consider it the duty of Congress at this time to adopt by law a measure which will be acceptable to railway managers and employes alike, whereby the lives and limbs of thousands in railway service which are year by year sacrificed may be saved. It is an indisputable fact that Congress has the prerogative, and science has provided a remedy for this growing evil. It would afford us great pleasure to assist you as far as would be acceptable to you in your noble efforts, as we deem them every way worthy of the consideration of all honest persons, yet to do so it would require of us, in order to comply, the placing of the whole matter before the representatives at our annual conventions. Nevertheless, I am instructed to say by my associates in office, that your noble purpose and the object to be attained is deserving of our personal consideration and support, which we cordially give; not only this, but will venture even to break an established custom adopted here, and place our names on the margin of this letter as an indorsement of your efforts in the behalf of employes in train service. May you succeed in your laudable efforts, and may the Representatives of Congress give, as the true representatives of the laboring element of this country, a measure that must prove a relief and benefit to the railway servants as well as the public.

With best wishes, very truly, yours,

Messrs. ARTHUR, INGRAHAM, EVERETT, and HAYS,
Grand Officers B. of L. E.

Per H. C. HAYS,
F. G. A. E.

L. S. COFFIN, Esq.,
Washington, D. C.

Mr. COFFIN. Now, here I stand, Mr. Chairman, in this wonderfully responsible position of voicing the feelings of these three great orders that run the trains. Every man of them is a practical man. Every man of them did more or less of this work, and the petitions that will come in here will be signed by men who are now in the actual work of handling these cars and these trains.

Now, I submit, Mr. Chairman and gentlemen of the committee, that these men know what they want.

Senator WILSON. Before you proceed, I will ask you what response you have to make to the suggestion of Mr. Loughridge in regard to the amendment by which he proposes to eliminate the term "automatic" from the bill.

Mr. COFFIN. I am very glad you called my attention to that, for I may have forgotten it. Of course you will allow me to say that I drew that bill. I spent a good deal of time and thought and had a great deal of consultation with practical men in regard to it. In drawing the bill, where I say "power or automatic brake," my only thought was a power-

brake operated by the engineer. I had no idea or thought of favoring any one particular patent or anything of that kind, and I am perfectly willing that there shall be eliminated from that bill everything that points to specifying that any one particular thing or patent shall be used, leaving the field open, and leaving the railroad as free as the air to select what their experts shall say is the best. That is one reason, let me say right here, why I antagonize the other bills.

Here is as good a place as any for me to combat what has been advanced by these railroad gentlemen before this committee in favor of some national commission, supervisory commission, that shall inspect these matters, these things. What do gentlemen mean by such talk? In one breath they tell us what wonderful progress has been made in this nation because you railroad folks are free, have not been trammelled by any legislation whatever in these matters; and then, in the next breath, they ask for a commission that shall hold them and handicap them all from now henceforth.

The CHAIRMAN. I do not understand that anybody has urged the appointment of a commission. There was one gentleman, I think, who suggested possibly that might do some good; one or two may be, but I do not know that anybody has urged it.

Mr. COFFIN. Not such a commission as is contemplated in the bills, but a commission that shall be a sort of supervisory affair and watch over the dangerous character of any of these things.

The CHAIRMAN. There was some suggestion of that kind, but I do not understand that it was insisted upon.

Mr. COFFIN. I should be certainly opposed to anything of that kind.

Now, perhaps, I might strengthen my position a little more. I have here the "Engineering News," I will leave with the stenographer an editorial which I will not stop and detain you to read now. I desire that it shall go into the record. The editorial is by the editor of the "Engineering News" in regard to the bills now before this Congress.

The editorial is as follows:

CONGRESSIONAL ACTION ON FREIGHT-CAR BRAKES AND COUPLERS.

Two bills have been introduced in the Senate and are now before the Committee on Interstate Commerce, each of which is intended to secure the very desirable end of hastening the equipment of all freight cars with automatic couplers and power brakes.

The bill introduced by Senator Cullom provides for the appointment by the President of a commission of five persons, three practical railroad men and two men familiar with car construction. The duty of this board is to be:

"To make careful investigation of car couplers in use and of designs for couplers not in use; to fully test all such couplers practically and determine by such investigation and comparison what type or character of car coupler is best adapted for safety and convenience in its use on freight cars."

This commission is to finish this work within one year from the time of its appointment, and is to file a report with the Interstate Commerce Commission, stating what type of coupler is recommended for adoption, and what time should be allotted to the railways for putting it in use. Copies of this report are at once to be served on the railway companies, who are to equip all their cars before the time specified, under penalty of \$100 per day for every car used without the specified couplers after the date set by the commission. In case the type of coupler chosen is patented, the commission may purchase the patent of the owner, if he will sell for a reasonable sum; otherwise the commission may select another coupler.

After the commission has thus beatifically disposed of the car-coupling question it is to take up other safety appliances, especially power brakes, and make recommendations to Congress as to the device or type best adapted for use.

The bill introduced by Senator Allison provides that after the bill takes effect no company shall put new cars in service, or repair cars requiring gone or more new draw-bars, without equipping them with "safety automatic couplers or draw-bars, such

as will not necessitate the going in between the ends of the cars to couple or uncouple them, but which will automatically couple themselves and can be uncoupled from the sides of the cars." After January 1, 1895, it is to be unlawful to use in interstate commerce any car not equipped with such couplers.

Concerning brakes, it is provided that all locomotives shall be equipped with driver brakes before January 1, 1892, and that after January 1, 1893, it shall be unlawful to run any train carrying interstate commerce "that shall not have enough cars in such train equipped with some kind of power or continuous brake, so that the engineer upon the locomotive can control the train, as passenger trains are now controlled by the engineer, without requiring brakemen to go between the ends or on top of the cars to use, as now the common hand-brake." The Interstate Commerce Commission is to collect statistics of the progress in the introduction of all the appliances mentioned.

In section 7 of the bill it is provided that, as soon as any railway has equipped its rolling stock with automatic safety appliances conforming to the specification, it may lawfully refuse to accept cars from connecting roads which do not conform to the standards adopted for its own rolling stock.

This is the substance of the two bills now before Congress, and of which it is stated one or the other is very likely to pass. On general principles it can be safely affirmed that it is better for Congress to entrust to a commission the power of investigating and deciding upon technical matters of this sort than to undertake the work itself. Circumstances alter cases, however, and it is quite evident that the Allison bill, which leaves the selection of the proper type of brake and coupler in the hands of the railways, is greatly to be preferred to the other.

Let us see what would be the effect of the Cullom bill providing for the appointment of a commission. In the first place, the present remarkably rapid progress in the application of M. C. B. Std. couplers would be entirely stopped while the commission was engaged in its investigation. No railway manager would venture to take a single step further in the introduction of M. C. B. couplers until it was definitely known just what type or style of coupler the commission would decide on.

Of course, if the President was fortunate enough to secure for the commission thorough mechanical experts, and men competent to take a broad view of the problem, it would be pretty certain what their decision would be; but there are many chances against the appointment of such a commission. It is well understood, of course, that from a hundred to a thousand patentees and owners of patents on various types of automatic couplers would, as soon as the bill became a law, unite and exert all their influence against the appointment of any man already committed in favor of the M. C. B. standard type. The owners of the multitudinous automatic links and automatic hooks not conforming to the M. C. B. type have never been reconciled to the loss of the money they have spent in pushing their various devices, and they would make a herculean effort to one more chance for securing the coveted prize.

But even supposing the Commission to be made up of able and impartial men, every one would await the result of its labors before proceeding further with the introduction of automatic couplers; and what delay would that cause? Remembering that the law makes it obligatory on the Commission not only to carefully investigate car-couplers in use and designs for couplers not in use, but to "fully test all such practically," it is easy to see that the limit of a year allowed the Commission to complete its work would have to be much exceeded. Every inventor will demand that his device be practically tested. The disappointed ones will combine to raise a howl that the Commission is partial, unfair, corrupt, incompetent, and has, moreover, been bought up in advance. The newspapers will take up the story, and the people will put implicit faith in it.

Reference has often been made in these columns to the need of a Government commission to collect statistics of railway accidents, investigate the more important ones, and make recommendations in accordance with its findings as to the best means of securing safety. In our issue of February 8, 1890, the appointment of a Government commission on uniform railway safety appliances was urged, with ample power to investigate and advise, but no power to compel action. But a commission, such as is contemplated in this bill, with the most absolute powers of dictation, is something without precedent in American legislation, and should be actively opposed by the railways of the country whose interests are at stake. The bill now bears the title "To regulate the use of safety appliances for cars." Some one should move to amend it by striking out the words "to regulate the use of," and substitute therefor the words "to stop progress in the introduction of," on the ground that the bill as amended would more accurately express the effect of the bill when a law.

The Allison bill is far preferable to the other in that it leaves the railways unhampered in the choice of the automatic couplers or power brakes which they will adopt, and in effect only says, "You must not neglect this matter any longer. Adopt whatever you find best, provided it is safe." If the car-coupler question were in the chaotic state it once was, such legislation might do more harm than good; but the question

has been thoroughly settled by the railways that the M. C. B. standard coupler is to be the standard for American practice. The Allison bill would have the effect of greatly accelerating the progress in the introduction of this coupler and the application of air brakes.

If Congress is to enact any law on this important matter, and it cannot be denied that the humanitarian side of the question presents strong reasons for its action, Senator Allison's bill seems to be a commendable measure. It is true, indeed, that it establishes a new and dangerous precedent for Congress to interfere in technical matters of this sort, and one which may lead to trouble in the future. At the same time there are State laws by the hundred on matters regulating the details of corporate activity. It is universally acknowledged that in this case State legislation is more likely to result in harm than good. The only recourse, therefore, is to Congress, and it can scarcely be doubted that that body has power to act in the case.

Details of the Allison bill doubtless need some amendment, especially the time allotted for the equipment of the cars, which is almost certainly too short. Section 7 of the act enables the railway companies which have already made heavy expenditures in introducing the M. C. B. coupler to exert a strong influence toward similar action on the part of their connecting lines, and is a very commendable feature. More rapid progress in the introduction of the coupler will be especially for the benefit of the railways which have already a large percentage of their cars equipped with it.

Before the close of the present year, if no check is put on the current rate of progress, it is pretty certain that 10 per cent. of the freight cars in the country will be equipped with M. C. B. automatic couplers and air brakes. The question of what coupler and brake is to be used on freight cars has been decided by the authorized representatives of the railway companies, and Government interference to open the question anew, and take it from the hands of the railways who are vitally interested in its correct solution, would be a great wrong. The Allison bill, on the other hand, leaves the railways unhampered in their work of reform. It only demands that old fogysm and false economy shall not delay the introduction of these appliances, now that they are decided on.

Many corporations are now actively pushing the reform; but others, it must be said, are paying little heed to it. To promptly secure that safety of the lives and limbs of railway employes, which is now feasible, all railway companies should begin at once the equipment of their rolling stock. They must begin sooner or later, and no valid reason for delay can be urged. It is to oblige prompt action on the part of these delinquent corporations, who fail to realize their proper duty to their employes, to the public, and to other railway corporations, that legislative action is called for.

Mr. COFFIN. I hold in my hand a letter received this morning from the editor of the *Master Mechanic*, which is a railway paper admitted to be of great value in railroad circles. This paper is edited by a man who was with us in all those experimental tests at Burlington, Mr. Crossman. I hope you will allow me to read it as the letter is very short. He says:

THE RAILWAY MASTER MECHANIC,
95 Adams Express Building, Chicago, May 13, 1890.

MY DEAR MR. COFFIN: Your letter concerning progress of affairs at Washington, together with a copy of the hearing, duly received, for which please accept my thanks. I most sincerely hope you will succeed in carrying through the measures in both houses, which are based upon your admirable Iowa bill."

* * * * *

Very truly, yours,

W. D. CROSSMAN.

L. S. COFFIN, Esq.,
National Hotel, Washington, D. C.

The editor of the *Master Mechanic* is acknowledged by all to be a very superior man in his position.

The *Master Mechanic* says editorially:

Legislation on the subject of couplers, brakes, etc., appears to be inevitable. Such legislation, to be effective, should, we most firmly believe, come through the national legislature. But unless something is done in Congress this session we may expect some of the State legislatures to take action themselves. If all the States that may take such action frame their laws on the lines followed by the act recently passed in Iowa, little harm may be feared from such. We may say here that the act was put through the Iowa legislature through the active work of ex-Railroad Commissioner

L. S. Coffin, of that State. As many of our readers know, Mr. Coffin's hobby is the amelioration of the condition of trainmen. He has ridden this hobby with all the energy that lies within him, and has very probably made some enemies in so doing, but he has done his work disinterestedly, and in his agitation of the questions relating to car-coupling, car-braking, and the giving of trainmen rest on the Sabbath day, he has always been consistently in the right. We made brief mention last month of the fact that this law had been passed and gave a short outline of its terms. We now give the law in full, not that we approve of State legislation on this subject, for our readers are well aware that we prefer action from the national legislature, but because we wish to place before our readers the words of a law which we consider to be very fairly drawn in the interest of both the trainmen and those who employ them.

Here is the editorial of the Railroad Gazette:

Within less than a month three serious accidents have occurred from failure of the air-brakes to control passenger trains. April 17, on the Southern Pacific, a heavy passenger train got away going down a grade of 116 feet per mile. The train broke in two on a curve and the rear cars were derailed. April 28 a passenger train on the Chesapeake and Ohio got beyond control on a 70-foot grade and the rear car was derailed, making a bad wreck, killing one and injuring eight. May 7 a Central of New Jersey train ran into a Lehigh Valley train in Allentown, Pa., killing two and injuring six. It is said "the air-brakes failed to work" and the train overran the station. Concerning the last of the three accidents, we have no particulars that are reliable. The first, that on the Southern Pacific, is supposed to have been caused by the fault of the engine runner. When a helper was taken on, the runner of the train engine put his valve on lap and shut the cock in the brake valve exhaust from the train pipe. Investigation makes it very probable that when the helper was cut off he did not open this cock. He was a freight runner, and had been in the habit of running an engine with an old-style brass brake valve. It is said that he lost his head when he found that the brakes did not respond to the reductions of pressure. It is said further that the brakes were not tested after the helper was cut off. The engineer had been through two instruction cars and claimed to be familiar with the working of the engineer's valve.

The most obvious lesson from this accident is (aside from all questions of discipline) that the best practice is to put in a cock in the train pipe below the engineer's valve and leave out the cock in the exhaust. This had already been done on many of the engines of the Southern Pacific, but not on the one in this accident. The only information that we have been able to get regarding the cause of the Chesapeake and Ohio accident is that the clevis on a brake-beam of the tender broke, the beam fell, some of the brake rigging of the baggage car was torn off, and some part of the broken brake gear hit and closed the cock in the train pipe at the rear end of the baggage car. This explanation is given by an officer of the road who looked into the matter and who certainly is qualified to give an authoritative opinion. Of course accidents of this sort are not unknown, although they are rare. The natural means of preventing them is well known and is now often applied. That is, to put the handle of the cock parallel with the train pipe when the cock is open. In that position it could very rarely happen that anything would strike the handle in such a way as to close the cock. The trouble at Allentown is still unknown. We may conjecture that it was another of those cases to which we have so often called attention in the last two or three years, in which the proportion of the train load available for braking was too small, and in which the slack in the break gear made it impossible to get the full braking effect. We might mention cases on first-class roads in which the slack on some of the passenger cars is enough to allow the pistons to travel the entire length of the cylinder and bottom on the cylinder head. Perhaps this was one of them. By way of contrast, we might mention a road which regularly handles coal trains carrying 60,000 pounds of coal in 25,000-pound cars, on 200-foot grades, with but about 24 per cent. of the weight braked. This is done successfully by keeping the brake gear in good order.

The Railway Review has the following editorial on the subject:

AIR-BRAKES IN "BREAK-IN-TWO" ACCIDENTS.

The Bay View accident has naturally attracted considerable attention to brakes and to train signals. As the train broke apart at a point which left all the twelve-wheeled sleepers in the rear section and the eight-wheeled coaches in the forward portion, some speculation has arisen as to the probable result of such an occurrence when the brakes operate perfectly upon both sections. The rear section, having brakes on only two-thirds of the wheels, could not be stopped as quickly as the forward part in which all the weight was available for retarding the speed, and the two sections would doubtless close up again with more or less force, depending upon cir-

circumstances. In the case of the Lake Shore accident it is doubtful if the crash would have been very serious, though some have claimed that it would. Unless the gap between the two should be very great there would not be sufficient difference in speed at the time of collision to cause a bad wreck.

The conditions on which this problem is based can, however, be found in more exaggerated form in freight service, and though there is not the same danger to human life as when passenger cars are involved, the greater frequency of "break-in-two" accidents and the safety of trainmen should cause the subject to receive careful consideration. When special freight, live-stock, or fruit trains are run over a line at a high rate of speed the trains are generally made up with a number of cars equipped with air-brakes placed next to the engine. It often happens that in a train of from twenty-five to forty cars the first eight or twelve will have air-brakes. One can readily see that if a break in two should occur at a point which would sever brake connections between the two last cars having air-brakes the front section would have nearly all of the brake-power. A most serious wreck would be far more probable under these circumstances than in passenger service, for these reasons: First, the weight of the rear section would be very great. Second, it would not be retarded at all except by the single air-brake car and such hand-brakes as might be set in the short time available. Third, the gap between the two sections would widen considerably before the brakes got the forward section under control, for the leverages are proportioned to the light weight of the cars, and the live load (unbraked) forming such a large portion of the total weight, would prevent the brakes from quickly overcoming the inertia of that section, especially if the engine was without driver brakes. If the engineer should, under such circumstances, open the throttle wide the result would be more disastrous if the train was on a down-grade. It is true that when the gap between the sections was once formed a limited amount of brake-power on the front section would be an advantage rather than otherwise, but at the moment of parting great brake-power is a great advantage.

As the work of equipping freight cars progresses the conditions outlined above will be more numerous, until a large portion of the entire freight equipment of the country is provided with air-brakes. With all cars in a train having power brakes the two sections of a broken train will not then be in a condition to do each other much harm, though unequal loading of cars will even then cause a small difference between the retarding power of the two sections.

I append an extract from the Railroad Gazette of May 2, 1890:

National legislation on automatic brakes and couplers again seems probable. The Flower bill has lately been up before the House Committee on Railroads and Canals. This bill provides that all engines and freight cars in the United States shall be equipped after November 1, 1892, with automatic couplers and automatic air-brakes. The bill seems to carry with it the elements of its own defeat. The power of Congress to compel the use of these appliances on engines and cars running within State limits will be questioned, and it would be impossible to equip the stock by November 1, 1892. If the bill means that equipment shall begin after November 1, 1892, it means nothing. Mr. Henderson, of Iowa, has introduced into the House a bill practically identical with that enacted in Iowa this year, and Mr. Allison has introduced the same bill in the Senate. Mr. Coffin has appeared before the committees in support of this bill. It embodies, of course, the results of the long and careful study that Mr. Coffin has given to the subject, and is as simple and moderate as could be expected. Its provisions apply to rolling stock used in interstate commerce. They are:

"New cars, cars shopped for general repairs, and cars requiring new drawbars shall be equipped with 'safety automatic couplers.'

"By January 1, 1895, all freight and passenger cars used in interstate commerce or in the construction of any interstate railroad must be equipped with 'safety automatic couplers.'

"By January 1, 1892, all locomotives must be equipped with driver brakes.

"After January 1, 1893, it shall be unlawful to run any train that has not enough cars in it equipped with power or automatic brakes to enable the engineer to control the train.

"Violation of the provisions of this law is made a misdemeanor subject to a fine of not less than \$500, and railroad companies are liable in civil damages for any injury to employés, provided there were in use at the time and place the injury was inflicted any car not equipped with automatic couplers and brakes.

"The companies are required to report annually, under oath, the number of cars used in interstate commerce and the number of cars and engines equipped as provided in the act.

"After a railroad company has its rolling stock equipped in accordance with the provisions of the act, it may lawfully refuse to receive from other companies cars that are not so equipped,"

Probably it would not be beyond the capacity of the manufacturers to supply the material necessary to comply with this bill, while it would be impossible to furnish that required by the Flower bill. Moreover, the choice of brakes and couplers is left so unrestricted that there can be no complaint of monopoly. The last dispatches indicate that Senator Cullom will introduce a bill to appoint a commission to prepare a draught of a bill. If this is done the Coffin bill may be defeated in the Senate.

I ask to insert as part of my remarks the letter of E. F. O'Shea, grand secretary and treasurer of the Brotherhood of Railroad Brakemen, addressed to the Interstate Commerce Commission.

The letter is as follows:

LETTER FROM E. F. O'SHEA, GRAND SECRETARY AND TREASURER OF THE BROTHERHOOD OF RAILROAD BRAKEMEN.

[Condensed.]

I desire to say by way of explanation that our Brotherhood is but five years old and its growth has been very rapid. I have no means of knowing how many brakemen are employed on American railways, therefore I am unable to say just what proportion of them are members of our Brotherhood.

Our Brotherhood has nearly fifteen thousand members, consisting of brakemen, conductors, yard-masters, and men engaged in various other occupations, all of whom have been brakemen. About one-half of that number, say seven thousand, are at present brakemen, and a claim for death or total disability is presented at this office every day in the year.

The whole number of brakemen is surely not less than seventy thousand, therefore the total number of deaths and totally disabling injuries are not less than three thousand six hundred and fifty each year; this does not include pinched fingers, mashed hands, broken limbs, falls, bruises, sprains, etc., from which the sufferer recovers.

The question arises, "Are all of these caused by the old style of brake and couplers?" I answer, "With very few exceptions, yes."

On inclosed notices under head of "cause" you will read various causes assigned, nearly all of which can be traced to the old brake and coupler. Nine-tenths of all "railroad accidents," "railway wrecks," "collisions," etc., mentioned under those headings, could be prevented by the use of automatic brakes and couplers on freight cars, and many cases of death from consumption, typhoid fever, pleuro-pneumonia, and other similar diseases can be traced to exposure and overexertion made necessary by the old-style brake and coupler.

No reliable insurance company wants to take such risks as to insure the lives of freight brakemen, and will not do so without an enormous charge for premium, which the brakemen's meager wages will not allow them to pay. Therefore our Brotherhood is his only protection. He cheerfully pays all assessments, knowing that when his turn comes, and he always expects it, his loved ones will not be left in absolute want.

There is no longer any excuse for delay in equipping freight cars with these safety appliances, for they have been tested and found to work better than the present style. Their adoption has been recommended by the Master Car Builders' Association, and the only thing now necessary is for the different companies to act together, which they will not do unless compelled by law.

This terrible slaughter of young, able-bodied men is increasing each year, and it has come to be considered a matter of course for a brakeman to have his life crushed out beneath the wheels and his mangled remains strewn along the track. The men themselves can not prevent it; somebody must do the work; and so they make the best of it and take their chances.

If an equal number of passengers were killed and crippled each year the people and press would awaken to a realization of the situation and demand a remedy. Is not the brakeman's life just as dear to him and his loved ones as the life of any other person, and should not an honest effort be made to save him from a death horrible to contemplate? This is especially true when we remember that there is a remedy if it would only be applied.

People say, "If he don't like his job he can quit." True enough, but what is he to do? They can not all quit, and there is nothing else for them to do; besides, their places must be filled, and the slaughter would continue. The newspapers no longer consider the death of a brakeman deserving of more than a two-line item headed, "Only a brakeman," and the reader passes it over and it is forgotten.

Had I the opportunity to do so, I could show you a record of death and mutilation of able-bodied young men that would make your heart sick. You would be horrified.

and think it all a hideous nightmare, but I can prove that it is as true as gospel. I could continue indefinitely, but it is unnecessary. I submit these facts and figures for your consideration and that of your colleagues in the hope that you will seriously consider the matter. If you do so, I am convinced you will see the need of national legislation, for State legislatures have never yet accomplished anything in this direction, nor will they do so while railroad companies wield so powerful an influence among them.

It is my firm belief that I have greatly underestimated the number of deaths and accidents and I am quite positive I have not overestimated them. If an equal number of horses or cattle were killed each year by the cars a remedy would be applied, and I ask you in the name of humanity and Christianity to take some action in the matter. To continue this horrible slaughter when it can be so easily remedied seems to me nothing less than a crime. The men are powerless to help themselves, the railroads are slow to act, and the butchery continues.

Improvements have been made in every other direction, but not one step in this. To strike is no remedy, to quit is starvation, and to continue is death; not immediately perhaps, but inevitable if he remains long enough in the service. There is an army of cripples in this country caused by the present style of brakes and couplers whose empty sleeves, mangled limbs, stumps, and crutches mutely appeal to your honorable body to remove the cause, and the list is being increased every day.

MR. COFFIN. I have here also a letter, which I will not stop to read, of the master of motive power, Mr. Rhodes, of the Chicago, Burlington and Quincy road, a friend of Mr. Brown, and an abler mechanic and grander and nobler man, perhaps, is not found in railroad circles. He was the chairman of the committee on experts, which had charge of those Burlington tests, and he speaks in high favor of this matter, especially of leaving the roads free to adopt what they, by their experts and master mechanics, prove to be good, especially as regards this matter of couplers.

MR. BROWN. Inasmuch as that letter has been referred to I would like to have it read and have it appear in the proceedings, and I will be responsible for its appearing so far as Mr. Rhodes is concerned. Inasmuch as it has been referred to I would like to know what it is.

MR. COFFIN. I am perfectly willing that it shall go in. I will not take the time to read it, but will hand it to the stenographer.

The letter is as follows:

CHICAGO, BURLINGTON AND QUINCY RAILROAD COMPANY.

OFFICE SUPERINTENDENT MOTIVE POWER,

Aurora, Ill., May 10, 1890.

DEAR SIR: I have yours of the 7th instant, with copy of your hearing before the Committee on Interstate Commerce, which I have read over, and feel much interest in.

I think the position you have taken in defending an adoption of a type rather than a coupler is a very sound one. It has always been a great mistake when any legislation has adopted specific couplers. The force and growth the Master Car-Builders' recommendation in the coupling question has attained is owing to the fact that they were far-sighted enough to adopt a type in place of a coupler. If any manufacturers are imprudent enough to construct their couplers of china or glass it should not in any way cast reflection upon the car-builders' standard. No one can dispute the correctness of the type. To be successful, however, it must be constructed properly and made of material that will stand the service it is subjected to. Brakes and couplings go together. One is as essential as the other, but there is this difference. Any automatic coupler can be operated in a fifty-car train without brakes. Air-brakes, however, can not be operated in fifty-car trains with any coupler except the M. C. B. type. This is a very important point, and one that seems to have been lost sight of in recent club discussions on the subject.

I have no special references to give on the subject. In the M. C. B.'s annual report for 1886 you will find the executive committee's elaborate report on couplers. Their report for 1887 contains the air-brake committee's report. Copies of these you can doubtless see in Washington.

I have not had time to carefully read over the bills, but I know the Iowa bill. Personally, I am not in favor of legislation especially for air-brakes. I think it too soon for this, and at the present time it would have the same ill effect as would certainly result if some particular coupler was adopted. We are trying now to get six

thousand six hundred and sixty-six cars equipped with air-brakes and couplers by the first of November. We can not get the air-brakes. During the month of April we ought to have had seven hundred and fifty brakes delivered, and in place of this, only received two hundred and five. Some of the material is also coming in very poor shape. The more we crowd the manufacturers, the poorer it is apt to come. Poor material often condemns what might otherwise be a good and useful device. If under the present condition of things it is impossible for us to get equipment for six thousand cars, what would it be if a demand is made, having in view the equipping of a million cars?

I think that there should be at least as much competition in the brake business as there is in the coupling business; it would not be wise or prudent to do much legislating in the matter.

Yours, truly,

G. W. RHODES,
Superintendent Motive Power.

Mr. L. S. COFFIN,
National Hotel, Washington, D. C.

Mr. COFFIN. I have also a letter here from the editor of the North-western Railroader, printed at Minneapolis and St. Paul, speaking of this same matter and hoping that this bill that we are talking about will be enacted into law.

I have here also a letter from the editor of the Engineering News to the same effect.

Now, in regard to any legislation at all, I think I need not say before this committee that all railroads oppose any legislation whatever that is to touch them in the management of their affairs. That is always so. We expected something of this kind, that they would oppose even this. But if you should ask the able superintendent of the Chicago, Burlington and Quincy, who has been before you, if he had objection *per se* to the bill of Senator Allison, or the Iowa law, for himself personally he would say no. But he does not want the precedent established that Congress or State legislatures shall go to work and specify anything of this kind.

Now, did any of these gentlemen bring any other objection against the passage of this bill? Did they not all admit that trains equipped with power brakes and automatic couplers were safer, so much so that when the Senator asked if they had any data to show the superiority and safety of a train equipped with automatic appliances to a train which was not so equipped, they said there had not been enough data of that kind to give a basis for a report. There is none; and this other thing, admitted by them and by all the public, that it is one of the most seldom things in the world that we hear of a trainman being crushed in that way in handling a passenger train, is because they are equipped with these safety appliances; and all these other dangers that attach themselves to the overhead bridges are to be wiped out the moment that you equip your freight trains as you do your passenger trains.

Senator REAGAN. While you are on this point, these gentlemen insisted that the roads were going on as fast as they could to apply the safety contrivances. What is your information about that?

Mr. COFFIN. My opinion is that such enterprising roads as the Burlington, the Pennsylvania, the New York Central, and some others that I might name, will go on.

The CHAIRMAN. The Erie was mentioned here?

Mr. COFFIN. Yes, sir; the Erie. They will go on. But you and I know enough of human nature to know that there are laggards in railroad management as there are laggards among farmers. There will be roads in this country which for the next ten years, perhaps, will not equip a single car with a safety, automatic appliance unless there is a law which will compel them to do it.

Now legislation has started in this direction. There is no question but the States, like Iowa, will follow it, and why I am so anxious to have national legislation is to secure uniformity in this matter. The railroads themselves, it seems to me, should be here helping me in this respect. It should be a uniform matter, and a national law is the only thing that will reach and accomplish that matter.

I want this point to be impressed on your minds, that if you have diversity in this matter it only adds more *danger*. The question asked Mr. Brown by Senator Blair—the idea was, is it not more dangerous to couple an automatic coupler with a non-automatic coupler. I do not fully agree with my friend, Mr. Brown. The boys told me that it is more dangerous because they are not used to it, and in fact some of the opponents of legislation of this kind say it adds to the fatalities. The only reason why it is not more dangerous is because of the boys not being accustomed to coupling a non-automatic coupler with an automatic coupler; that is all.

Now, again, Mr. Brown says, Mr. Roberts says, Mr. Ely says, and the Erie road folks say “that they shall go on and equip their cars just as fast as they can, law or no law.” That is all true, probably, but is it just to these roads, who have to take the cars from all connecting lines, to introduce into their trains these more dangerous cars that lack these safety appliances and have the men run all the risk about it, which will be and must be the case? Now, it seems to me I need detain you but a very short time. Let me repeat that I stand here with something like seventy-five thousand men in these orders behind me.

The CHAIRMAN. It is alleged here by Mr. Brown and Mr. Roberts, and others I think, that practically it is impossible for these poor roads to comply with a law such as you propose; what do you say to that?

Mr. COFFIN. With all due respect to Mr. Brown, I do not believe anything about it. These poor roads, of course, have——

The CHAIRMAN. Mr. Roberts said the same thing.

Mr. BROWN. I referred especially to the Northwestern roads.

Mr. COFFIN. These poor roads, as a rule, do not have a great many cars to equip. It costs but little comparatively to equip them. If a palace-car train, for the sake of competition, is necessary to be used on the Central Iowa road, which Mr. Brown spoke of—I do not know whether he did publicly, but to me—which is a very poor road, there is always money enough to secure it. Supposing it is burdensome; is not money cheaper than life?

The CHAIRMAN. Of course it is. It is only a question as to whether they can do it. That is, whether they can get the money. Many of these poor roads are already in debt more than they are worth.

Mr. COFFIN. If they can not do it then let them go to the wall. I would like to inject a sentence right there, that I wish this had been acted upon years ago. There should be lodged somewhere power that shall say when a road shall be built and when a road shall not be built.

The CHAIRMAN. That has gone on practically.

Mr. COFFIN. You can stop it now from going on any further.

The CHAIRMAN. You can not do that, because these roads are built under State charters and State officials and afterwards become interstate roads by virtue of consolidation.

Senator WILSON. That is a safety appliance that belongs to another field.

Mr. COFFIN. Can there be any hesitancy, no matter what the plea of poverty is, in your saying that from now on the business of having freight cars built four-fifths of iron and wood and the other fifth of the

blood of the trainmen shall be stopped? That is virtually the practice now. Can there be any plea of poverty that can prevent you from taking such a course? Let the railroads finish their cars before they put them into use, and even if they are not able to, if they run in debt, let them charge the public more for the use of them. That is a point that it seems to me we can not get around.

Now, when the consensus of opinion of the very men, the thousands, who say that this bill is the practical thing and what they want, that it will save the lives of these men, what excuse have we for not having it enacted into law?

Senator REAGAN. If we had any way to squeeze the watered stock out of these roads there would not be much trouble in equipping them?

Mr. COFFIN. I do not think we will have much trouble. If you say so they will do it; but if you do not say so it will not go on but only a few of these roads. Now I know that gentlemen like Mr. Roberts, men of brains and standing, can come before you here and have great influence; but I do say that the practical men who do this work on these trains ought to have just as much influence.

The CHAIRMAN. It is not an influence of individuals on this committee. It is a question as to what our duty is.

Mr. COFFIN. The influence of the testimony given.

The CHAIRMAN. Of course whatever a man says, if it is true, must be considered.

Mr. COFFIN. Yes; but are not these trainmen qualified to speak practically?

The CHAIRMAN. Most assuredly so.

Mr. COFFIN. It is the voice, without a single exception, of every one. As Mr. Brown himself says, they are in favor of these appliances, and I can not see why as the representatives of these men they should not have this, the first thing they have ever asked for.

Senator BLAIR. How many freight cars do you say there are in this country?

Mr. COFFIN. About a million freight cars, and about one-tenth of them are already equipped with power brakes and automatic couplers.

Senator BARBOUR. I do not wish to divert you from the line of your remarks, as you may already have spoken upon the point. Is it not a fact that the railroad companies of the country as a general rule are adopting these various devices to improve the safety and management of trains?

Mr. COFFIN. They are to some extent; but probably not one company in ten is doing it.

Senator BARBOUR. You mean not one in ten is making any effort whatever in that direction?

Mr. COFFIN. I think I may say, so far as the automatic brakes and couplers are concerned, that there are a great many roads that are not doing it at all.

Senator BARBOUR. Is that 10 per cent. of the freight cars that have adopted these improvements confined to a very small number of companies?

Mr. COFFIN. Yes, sir.

The CHAIRMAN. The larger trunk lines?

Mr. COFFIN. Yes, sir.

The CHAIRMAN. The sum and substance of it is that these gentlemen who have been before us yesterday and this morning, at least Mr. Brown, this morning again, expressed the belief that any legislation

on the part of Congress was unnecessary, and would not aid in the progress of the application of these new appliances as to time.

Senator BARBOUR. And would possibly retard them.

The CHAIRMAN. You take the opposite view?

Mr. COFFIN. Yes, sir.

Senator BLAIR. What effect has the legislation in Iowa had in that regard?

Mr. COFFIN. It has just passed, and it is stimulating, as Mr. Brown says, the companies very much to put on these improvements as fast as they can.

Senator BLAIR. In that State?

Mr. COFFIN. Yes, sir. The companies that belong in that State. His company is considered.

Senator BLAIR. When did the law pass?

Mr. COFFIN. This winter.

Mr. BROWN. I want to correct Mr. Coffin. I did not refer to the Iowa law at all. In fact it has had no effect on our road, except to cause some discussion as to whether or not something of that kind might not be undertaken by the national Congress. Our order for automatic brakes and couplers was placed before that law was even agitated.

Mr. COFFIN. The ground I had for saying what I did was this: I corresponded with some of the different manufacturing establishments who were manufacturing couplers and brakes, and they told me their increase in orders had been very great within the last month or two. One company of couplers that last year put out some thirty-five thousand, the four months of this year they have put out, or have had orders for, twenty-nine thousand already, a wonderful increase.

If I recollect rightly, I think I have stated that the main objection to the passage of this bill on the part of the companies is not to the provisions of the bill. It will not hurt them, they say, but they do not want you to establish that precedent. That is all I think there is about that, if I recollect aright.

The CHAIRMAN. They take the ground that no legislation is necessary. There is no great amount of discussion of the particular bill you refer to. Take Mr. Roberts, for instance; I do not think he discussed the bills very much at length. According to his view there was no necessity for such legislation.

Mr. COFFIN. There is one thought more that I think should have bearing, and quite a bearing—there are two—in the future. One is in regard to the overhead crossings. The time is coming when in all thickly-settled communities and States you will have a law forbidding all grade crossings; it should be done. The Railway Commission of Massachusetts make a very strong point in favor of automatic brakes on cars. It will lessen the expense to the railroads wonderfully in making these overhead crossings for the public in many ways: 1st. The actual expense in building them, so much less expense in not having them so high. Another expense is that the abutting property is greatly injured by these raised ways, and they have to pay very high for it, which, if you have no necessity for anybody being on top of the cars would be very much less. Another thing is the great traveling public has a great interest in this matter, and if there was not anything else, this law should be passed in the interest of the public.

Why, sir, if I could picture before this committee just one thing which took place on Mr. Brown's road last 4th of July, it would settle this question perfectly as it has settled it for that road. A great freight-

train, of twenty-nine cars, with a double header, was on the 4th of July leaving a station. A passenger train was over here [indicating] at this next station, full of people, so full that women, children, and men were standing in the aisles and out on the platform. By some mistake of the dispatcher, those two trains were sent out and the freight train ordered to go to that other station where the passenger train was supposed to be, as fast as steam could make its wheels turn. Mr. Brown was sitting in his office when the dispatcher ran in and told him he had sent those two trains together. Mr. Brown was thunderstruck for a moment; then rising up with the energy of a railway official, he had the wrecking train and the physicians, and the nurses on the way to that scene of supposed disaster before the trains came together, and had they come together, as he expected they would come together, there would have been a recital of the worst calamity in railroad circles we have ever had.

What was the fact? Nineteen of those freight cars were equipped with the power brake, and as those trains, coming round a point, saw each other, only about 1,000 or 1,200 feet apart, instantly every car of those nineteen had the brake applied, and one of the most fearful calamities was averted. It converted the Chicago, Burlington and Quincy road to use a power brake on every train. You and I can be riding in those passenger trains and we are liable to be run into any time, because the engineer can not apply the brakes at the moment of danger. I think I am correct, Mr. Brown, in describing the main points of this occurrence?

You will see collision after collision, and why? It is because they have not the power to control the train. As I said in my statement here the other day, in my investigations of collisions and wrecks in Iowa in my honest judgment 50 per cent. of them could have been prevented if the engineer could have had control of the brakes.

I say that everything that should have any weight at all is in favor of the passage of just such a bill, perfected so that it shall be all right so far as its legal phrases are concerned, and no railroad in the country can be injured by it. Mr. Harris, the manager of Mr. Brown's road, in speaking of the power brakes, says that after his experience with power brakes on his road no railroad can afford to run freight trains without the power brakes. It is a matter of economy to the roads. Of that I am satisfied. And shall we, just for fear of establishing a precedent, keep these dangers open and before the public and cut down these men by the score every day, when no injury, when no hurt can come to my friend's road or any other road by the passage of this bill?

I thank you, Mr. Chairman and gentlemen of the committee, for your patience and attention.

At 12 o'clock m. the committee adjourned until to-morrow at 1 o'clock p. m.

WASHINGTON, D. C., *May 16, 1890.*

The committee met at 1 o'clock p. m. pursuant to adjournment.

The CHAIRMAN. We will hear Mr. Cook now.

STATEMENT OF B. C. COOK.

Mr. COOK. I represent the Chicago and Northwestern Railway Company. I have been one of the executive committee of the Western Railway Association, which comprises about half the railways in the United States.

A few years ago the question was mooted by the railways belonging to that association as to what could be done to secure a better plan of coupler, and also in relation to a power brake. The committee of which I was a member investigated the matter as carefully as it could and found that it was impracticable for us—and we believed for any class of men not practical mechanics—to arrive at a satisfactory solution of the question. We thereupon recommended to the roads belonging to the association that the matter should be referred to the master car-builders, and that they should conduct such series of experiments as might be necessary to thoroughly test the question. That, I believe, was the origin of the association known as the Master Car Builders' Association. This representation was made to the roads, and is the action of the roads themselves and not the car-builders of their own motion.

The CHAIRMAN. When you say "the roads," do you mean all the roads or certain roads?

Mr. COOK. I mean the action which has been taken is the action of the roads represented in that association.

The CHAIRMAN. What were they?

Mr. COOK. I can not give the names of the individual roads; about one-half of the railroads in the United States, comprising generally the great trunk lines of the North and many of the trunk lines of the South.

This series of experiments adopted by the Master Car Builders' Association has resulted in the adoption, in June, 1888, by that association, of a system and plan composed substantially of the Janney coupler and the patent for contour lines of couplers. By constructing the coupler in accordance with the plan of the patent for contour lines this result is obtained, that the coupler may be used in connection with any other automatic coupler constructed with the same contour lines. Those contour lines, when any automatic car-coupler is constructed in accordance with the contour lines, it will couple with any other automatic coupler having the same contour lines.

Senator BLAIR. What do you mean by contour lines?

Mr. COOK. I will submit an explanation of that.

Senator BLAIR. So that they fit with each other?

Mr. COOK. Yes, sir.

The CHAIRMAN. The device of the Master Car Builders' Association go together?

Mr. COOK. Yes, sir. Now there are about four thousand patented devices for car-couplers. There are two hundred and thirty patented devices for automatic car-couplers. Twelve of these are main, fundamental devices, and what I wish to say is that by adding this device of contour lines they may all be operated together as automatic couplers.

Senator BLAIR. The two hundred and thirty.

Mr. COOK. Any which have these contour lines, yes, sir; the device which was agreed upon by the master car-builders after many months of experiments, and experiments conducted at great expense.

The CHAIRMAN. By the railroads?

Mr. COOK. By the railroads. The device embraced the idea that they should have couplers which would connect together, whichever one of these automatic couplers was adopted.

I wanted to speak of that just as a matter of history. That automatic car-couplers were adopted by a very large number of roads. I can not give the exact number. But the Northwestern, the road which I represent, adopted it, and has altered two thousand eight hundred cars on that plan.

The CHAIRMAN. Putting these appliances to them?

Mr. COOK. Yes, sir; and it has resulted in this, that cars may be coupled and uncoupled without the men going between the cars in any manner.

I understand that the reason for legislation on this subject is to be found in the fact, if fact it be, that these couplers required are less dangerous and safer.

The CHAIRMAN. Statistics have been produced showing great injury to limb and property by the old coupler.

Mr. COOK. This master car builder's plan has proved, so far as the danger is concerned, absolutely so that the cars may be coupled and uncoupled without going between the cars. Now I represent a road which does not want to be understood as resisting in any way any plan practicable to secure the adoption both of the power brake and of the automatic coupler. What I want to talk about is, which is the best way to do it. We are satisfied that the best way to do it is to take this master car builders' plan; that no commission or any other body of men can possibly be instituted which can have the facilities and the requisite technical knowledge to place them on a par with the Master Car Builders' Association; and the expense which they have been through in making the experiments is something very large and such as the Government would not go to in making experiments.

Now, the only question is, what course is best to pursue to attain the end sought, and we do not want to antagonize that end in any way. If a commission were to be appointed, I suggest that the change which is now going on so very largely—I am going to speak about that in a minute—from the old link and pin to this Janney automatic coupler, with the improvement of which I have spoken, would be stopped. It would be impossible, say for the Northwestern Road, to go on making changes at the expense they are now doing and at the same time running the risk of having to adopt another plan and throwing away all they have done.

The CHAIRMAN. I think Senator Blair will bear me out, probably, in saying that the investigation so far has pretty much exploded, I think, any idea that any Government commission is necessary to be appointed. Is not that so, Senator Blair, in your mind?

Senator BLAIR. I think so, or that there is probability of the adoption of any very fixed and well prescribed limitation upon experiment, honest and anxious experiment, for improvement hereafter. I should judge from the testimony before the committee that there was not any probability that they would bind these gentlemen to any particular suggestion of appliances.

The CHAIRMAN. I think the only question, really, which is left for us is to determine whether any action by Congress is best or not.

Mr. COOK. I will discuss that question for two or three minutes just by a statement of facts.

The number of cars in the United States which would have to be remodeled is stated in Poore's Manual, for 1888, to be a million and over, a million and five thousand. The cost of doing it is a matter settled and determined by our road. We have ascertained that the minimum cost of putting on this master car builders' automatic coupler, with this contour lines attachment, is \$25, and that to put on the power-brake is \$70.

The CHAIRMAN. Making the total \$95?

Mr. COOK. Yes, sir.

The CHAIRMAN. For both ends of the car?

Mr. COOK. Yes, sir.

Senator BLAIR. Seventy dollars for the brake and \$25 for the coupler.

Mr. COOK. Yes, sir.

Senator BLAIR. The probability is that there are many roads which can not do that with the economies a great corporation can. Probably \$100 a car is a fair estimate.

Mr. COOK. Yes, sir.

Senator BLAIR. And a million cars to be changed would be \$100,000,000.

Mr. COOK. Yes, sir. I am just giving you the results of the experiments on the Northwestern.

In the first place I should say that the power-brake stands on a different footing from the coupler, because the power-brake has been demonstrated to be a success. It is settled that they have found a power-brake which can be applied successfully. Up to a very short time the question of an automatic coupler was so doubtful and dubious that it was almost impossible to settle upon any.

When this master car builders' automatic coupler was agreed upon, the Northwestern Road commenced immediately to make the change. They have put the automatic coupler on two thousand eight hundred cars. On what proportion of the cars have they power-brakes, Mr. Schroyer?

Mr. SCHROYER. On an equal number. The power brake is on two thousand eight hundred and the automatic coupler is on two thousand three hundred.

Mr. COOK. They are progressing just as rapidly as possible to make the change on the entire road. The gentlemen of the committee will see that having begun to make the change it is absolutely necessary to complete it and carry it through?

The CHAIRMAN. As quickly as you can?

Mr. COOK. Yes, sir.

The CHAIRMAN. What actual progress are you making now?

Mr. COOK. We are equipping several hundred cars per month. I suppose, myself, about four hundred cars per month.

Senator BLAIR. How many freight cars have you?

Mr. COOK. About forty thousand.

Senator BLAIR. It would take you eight years then?

Mr. COOK. The extent to which it can be carried is only limited by time and money.

Senator BLAIR. What is the increase in the number of your cars?

Mr. COOK. About four thousand annually.

Senator BLAIR. Those four thousand cars are all equipped in the new way?

Mr. COOK. Yes, sir.

Senator BLAIR. How long will it be before they are worn out?

Mr. COOK. I am going to speak about that in another connection.

Now there are three things to be taken into account by practical men, devising a practical scheme. The change must be effected, not by beginning with the old and worn-out cars, which need repairing most, as one of these bills speaks of, that any car coming from the repair shop shall be equipped with these new appliances. There are a great many cars too valuable to throw away which are not valuable enough to have these improvements put upon them, to the exclusion of other cars which are newer and stronger and will have a longer life. If we begin with the poorest cars we would be working on the poorest cars all the time. The fact is, that the expense is greatly reduced by putting these improvements upon strong cars which are going to last. That is manifest.

The second question is, how fast is it possible to procure the material and labor? You can not put on these automatic brakes by statute. The amount of skilled labor applicable to that change is very limited. The material is in great demand now. The fact is that beyond the supply of material and skilled labor it is impossible for the roads to go if they were to be hung.

The CHAIRMAN. The officers?

Mr. COOK. That is a physical impossibility; and I state my conviction and belief, and I think our master mechanic will bear me out in saying that the road is using every endeavor in its power, with the amount of material and labor that can be procured.

Mr. SCHROYER. Yes, sir.

Mr. COOK. And unless you could by statute increase the amount of material and labor we could get, you can not make us go any faster.

Then, the next question that I suggest, first, the cost; second, the amount of material and labor applicable to it; third, how large a percentage of the equipment of a road may be withdrawn from actual use for this purpose without impairing the service.

Suppose we have four hundred cars out a month. It can not be increased without impairing the equipment of the road for actual service, and injuring not only the road but the public. I suggest these things because they are practical difficulties which have to be met by the railroads, and there is no escaping them. The railroad managers, the mechanics, and the master car-builders can not get around them. Mr. Schroyer knows more about that than I do, but I know enough about it to know that there are bars and limitations put up against going on with the improvements any more rapidly.

The CHAIRMAN. The Master Car-Builders' Association urge the passage of some law.

Mr. COOK. I do not know about that.

The CHAIRMAN. I think Mr. Coffin presented a communication on that subject to the committee, which goes into the testimony.

Mr. COOK. I want to make a suggestion. There is no doubt that the main roads engaged in interstate commerce are adopting, with all the speed that is practicable, this master car-builders' coupler and this improved brake.

Senator BLAIR. Which do you think the more important with a view to safety, the air-brake, or the automatic coupler?

Mr. COOK. I should think the brake would be more important than the coupler. That would be my notion. I am not a mechanic, and I do not know.

The CHAIRMAN. So that the conclusion necessarily drawn, as I suppose, from your testimony so far, is that any legislation would be useless?

Mr. COOK. Yes, sir.

Senator BLAIR. So far as your road is concerned, did you consider this other question, which I think is the only one in the minds of the committee, whether legislation would be an advantage in securing action upon the part of those roads which otherwise would be dilatory?

Mr. COOK. I want to speak about that. I have not spoken about it.

There are certain laws of trade which are more imperative than statute laws; stronger laws. Suppose these roads which I have referred to adopt this plan of coupler and of brakes. The other roads have either got to come into that scheme or they have got to abandon the interstate traffic and be restricted to their own lines of road.

Our road, when it gets these improvements on its cars, is not going to receive cars equipped with the old link and pin coupler and the mere brake which is operated from the top of the cars.

The CHAIRMAN. Twisted around?

Mr. COOK. Twisted around.

It is an axiom in railroad matters that a car is only earning money when its wheels are turning. Here is a road which has its cars loaded with freight to go way off into another State. That is the ordinary, common mode of business of the railroads. You look at a train of cars and read the names on the cars and you will find they are billed to a dozen different roads.

The CHAIRMAN. And going to a dozen different States?

Mr. COOK. And going to a dozen different States.

Senator BLAIR. Oftentimes 3,000 miles from home.

Mr. Cook, What I say is that all the roads will be compelled by the action of the main trunk lines to go into the matter. They will be compelled with a force to which the force of a statute is nothing.

The CHAIRMAN. To avoid going out of business?

Mr. COOK. Yes, sir; they lose the money; they lose the use of their cars; they are shut out of traffic.

Senator BLAIR. In what way can a statute, which does not discourage improvements, which does not fetter a road like yours, which is doing the best it can, which does not interfere with the Master Car Builders' Association recommendation, retard or interfere in any way? It simply requires certain things to be accomplished. In what way can that retard anything?

Mr. COOK. If it requires the improvements to be made within a proper time I have no objection to it.

Senator BLAIR. What is that proper time, in your judgment?

Mr. COOK. I have just given you the data.

Senator BLAIR. So far as your road is concerned have you any judgment as to the country at large?

Mr. COOK. I think our road has facilities for doing as well as anybody and as fast as anybody.

Senator BLAIR. Do you think if it were required to be done in five years that that would be burdensome to the transportation interests of the country?

Mr. COOK. Well, sir, I do not believe it can be accomplished in five years.

Senator BLAIR. If you prescribe a very great period of time it will look to them as though they had plenty of time and would result in delaying matters. It would tend to procrastination instead of haste.

Mr. COOK. The question was argued before the Iowa legislature recently. Our general manager, Mr. Whitman, was there. They had

adopted the year 1893. After hearing the evidence in relation to the time they put the time five years from the 1st day of next July.

Senator BLAIR. Making it 1895?

Mr. COOK. Yes, sir; the 1st day of July, 1895.

The CHAIRMAN. That is for Iowa?

Mr. COOK. Yes, sir; it is for their State.

Senator BLAIR. Do you see any reason why any other State should adopt a longer time than Iowa?

Mr. COOK. No, sir. I think I see a reason why Iowa should have adopted longer time. I do not believe it can be done in that time. That is a question which you can judge of. Our company is in earnest and would have made a good effort to accomplish it in that time, law or no law.

Senator BLAIR. If there was any general expression, even of the national will, that would cover interstate commerce and really all commerce, then those who furnish the appliances and the men who do this work would be assured of five years' business, and they could make their investments, get their plants, turn their attention that way, knowing that they would have the work to do. As it is now, they do not know whether this, that, or the other road will do anything about it. They are shy and chary of making the necessary investments in material and plant, perhaps, to supply the cars of the country. They have to wait orders, in other words. Now here is a statute which is an order; it is an order for all this hundred millions worth of couplers and brakes; it is an order on the country to furnish that amount, and the railroads have got to go in and do the subsidiary business of distributing it around. The nation has ordered the constructive power of the country to furnish a hundred million dollars worth of couplers and air brakes, power brakes, within five years. They can not pitch in and get all ready, because they know that this, that, and the other road will come in with the minutia which makes up the aggregate. As it is now, there is no certainty at all that a quarter of the roads will come in at all. The important roads are doing it, your road is doing it, the roads whose representatives came here are doing it, but the great mass of the roads are not indicating any desire or active effort on their part.

The CHAIRMAN. The reason they come here is because they were invited to come. They were notified that we would like to hear them, if they had anything to say.

Senator BLAIR. Those who come here representing the loss of life and limb are anxious to put a stop to it. They insist upon immediate action. Mr. Coffin and others, these train men, want relief; and one of these big roads has already got the name of "man-killer."

Mr. COOK. I want to be understood as not antagonizing, in behalf of the Northwestern road, this scheme of having automatic couplers and power brakes. They are not going to do it; they are going to adopt them with the utmost speed, but I want to say at the same time that it is impossible for a statute to overcome physical difficulties. There is no way.

The CHAIRMAN. On the question of time?

Mr. COOK. Yes, sir; on the question of time. Now the question of money. That is a very important question. The railroads have got to find the money, The Northwestern road with its forty thousand cars has got to find \$3,800,000 in money. Then it has got to find material and labor, labor which is specially skilled, which they have got to have.

The CHAIRMAN. Where are these appliances now manufactured?

Mr. SCHROYER. At Pittsburgh, principally.

The CHAIRMAN. Are they not manufactured by more than one or two firms in the country?

Mr. SCHROYER. Yes, sir. The air brake is manufactured by one firm exclusively, as yet. The automatic couplers are manufactured at Pittsburgh, Cleveland, Chicago, and to some limited extent, at Milwaukee.

Senator BLAIR. Are they all patented?

Mr. SCHROYER. Yes, sir.

Senator BLAIR. As you increase the demand is there a tendency to increase the cost?

Mr. SCHROYER. Not as yet. As the demand is increased the quality of the product is getting poorer—

Senator BLAIR. One other gentleman spoke of that.

Mr. SCHROYER. As a result of haste in getting out material.

Senator BLAIR. That is a very serious question.

Mr. COOK. I want to reply to a suggestion of Senator Blair, which has passed my mind just now.

Senator BLAIR. I asked Mr. Schroyer if this increase in the demand would have a tendency, or did have a tendency, to increase the price charged. I asked him, also, if the work was done in accordance with certain patent rights.

Mr. COOK. Now, the patent which is the basis of the master car-builders scheme is the Janney patent, which has expired, and which is now the property of the public.

The CHAIRMAN. I am glad to know that.

Mr. COOK. The patent for the contour lines, which is necessary to make these different plans work together, is an active, live, patent now.

Senator BLAIR. How much longer has it to live? Is it owned by the same party as the Janney couplers?

Mr. COOK. I believe so.

Senator BLAIR. Is that improvement on the Janney coupler patented?

Mr. SCHROYER. The contour lines were the Janney patent originally. They have waived their claim on the contour lines in favor of the Master Car Builders' Association.

Senator BLAIR. Then there is no patent now?

Mr. SCHROYER. Not on the lines themselves. The patent is on the peculiar construction.

Mr. COOK. There are patents on various automatic couplers, but not upon this coupler which is recommended by the Master Car Builders' Association. There is no patent so far as the roads represented in the Master Car Builders' Association are concerned.

The CHAIRMAN. So far as the roads represented in that are concerned?

Mr. COOK. Yes, sir.

The CHAIRMAN. But they are not all represented?

Mr. COOK. No, sir. Now these contour lines have a patent on them. It is a patent to Janney, of February 25, 1879. That patent covers what is known as the contour lines of the rotary hook and draw heads. The owners of the patent have voluntarily agreed to grant licenses under the same to all railroads who are members of either the Eastern or Western Railroad Association, free of charge. These are the associations I suggested to you, which got up these tests.

The CHAIRMAN. And really were the originators of the Master Car Builders' Association.

Mr. COOK. Yes, sir. There are about two hundred and twenty live pat-

ents for vertical hook couplers now. But this Master Car-Builders' plan has escaped the patentees. They can not be bothered by patentees. The only question is the question of time and money. I conceive that many roads must be seriously embarrassed by a demand made upon them to advance the sum of money necessary to put these improvements on their cars. It is a matter of very great anxiety to our road. They have made an appropriation of \$10,000 a month for the coupler. That is being used now.

The CHAIRMAN. One hundred and twenty thousand dollars a year?

Mr. COOK. Yes, sir.

Senator BLAIR. Do you not think that there will be a corresponding saving, so that after a year or so it will be found to be no tax upon the road?

Mr. COOK. I can not see where the saving will come. Of course I do not speak from personal knowledge, but I suppose it will take just as many men to run a train of cars equipped with these improved appliances as a train of cars equipped in the old manner.

The CHAIRMAN. That is the testimony of experts.

Senator BLAIR. There is a saving in the way of collision and danger to life and limb and property, and in that direction?

Mr. COOK. I think that depends upon other things.

Senator BLAIR. You do not think they contribute to economy?

Mr. COOK. They may contribute to the safety of life.

Senator BLAIR. Is there not a saving of money from the introduction of the power brake and the automatic coupler?

Mr. COOK. I am not competent to answer that question, sir. I am not a practical mechanic.

Senator BLAIR. I had reference to the general running of the road.

The CHAIRMAN. In the way of damages for loss of life, and property, and limb, etc.

Senator BLAIR. And the smashing of trains, and all that.

Mr. COOK. For fifteen years I was general counsel of the Northwestern road. My experience in these matters is that the amount of damages for personal injuries depends upon so many other contingencies that no exact estimate could be formed as to what might be saved by changing the brakes and couplers.

The CHAIRMAN. There is a little security against the wrecking of trains by having these appliances?

Mr. COOK. Yes, sir. Our folks think that they can avoid danger to life and property, of course; else they would not have helped, as they did, to initiate and carry forward this movement. In relation to the money, you have got my idea about that. In relation to the amount of material and labor which can be got, under any contingency, by any pressure, and in relation to the amount of equipment which can be withdrawn for the purpose of having these repairs made at any given time, those are matters which I think should be carefully considered, because they are matters of very grave importance.

Senator BLAIR. How would a suggestion of this kind do: Each road should equip at least one-fifth of its rolling stock annually; some provision of that kind, one-fifth or one-sixth of its rolling stock annually should be equipped with these appliances? Fix a fractional proportion.

Mr. COOK. I think, if the proportion were fixed properly, that that would be all right. I do not object. I want to be understood as not objecting to requiring every new car to come on to the road with these improvements. I do not object to that.

Senator BLAIR. That would cover the increase?

The CHAIRMAN. I suppose you do not have any new cars which have not these improvements on?

Mr. COOK. No, sir. It would not make any difference to us whether there was such a law or not.

The CHAIRMAN. I should think all the roads would do that, unless they have begun to buy your old cars as the best they can do.

Mr. COOK. But, gentlemen, I beg you, do not provide without due consideration for making these changes on cars which are now in use. That is substantially asking us to put the improvements on the old cars to the exclusion of others. I think it is true that there is constant improvement even in this Master Car Builders' coupler. The improvement mainly consists in the better manner of annealing the material, so as to provide against breakages, and if we were to get any cast-iron thing, gotten up by a commission, that would be the end.

Senator BLAIR. Have you any suggestion to make as to what could be done by the committee or by Congress to meet this demand that something be done, for there is a very strong pressure of that kind?

The CHAIRMAN. Mr. Coffin states that there will be petitions with 30,000 or 40,000 signers, I believe, here in a very short time in favor of legislation on this subject, the employes of roads and the members of these different associations.

Senator BLAIR. Now what can we do that at least will not be injurious?

Mr. COOK. I do not see how you can help anything by legislation, under the state of circumstances that now exists.

Senator BLAIR. Assuming that we have got to do something, what can we do, from your stand-point, that will be the least hurtful?

Mr. COOK. I should think that the proposition to require new cars to be equipped with these improvements would not be objectionable. It would not hurt anybody who is really, in good faith, endeavoring to carry out the result.

Senator BLAIR. And that could apply everywhere.

Mr. COOK. Yes, sir.

Senator BLAIR. There is no part of the country where cars are made at all where they could not get the necessary facilities.

Mr. COOK. It is not like withdrawing their present equipment. It is having the new cars take a few days more time to complete.

Senator BLAIR. How would this do, that no road should add any car to its existing equipment without putting on these appliances, so that they should not go and buy your old cars; whenever a road puts on another car, adds another car to its ownership, or any transportation line or freight line association increases its ownership of cars, that they shall apply the power brake and the automatic coupler?

Mr. COOK. We have not got the cars to sell, and I do not believe anybody has, but there would be no objection to your suggestion.

The CHAIRMAN. I should think that was about as moderate a plan as could be adopted, if we do anything.

Senator BLAIR. That no new car shall be made without these appliances, and that no road shall add to its equipment of cars by purchase of second-hand cars, or otherwise, without applying these improvements. There will be a great tendency, as the more powerful roads proceed with this process of transformation of their rolling stock, to get rid of their cheaper and more worn-out cars.

The CHAIRMAN. By selling them to other roads?

Senator BLAIR. Now, as a practical man, do you think there would be any objection to a provision of that kind?

Mr. COOK. I do not think so.

STATEMENT OF CHARLES A. SCHROYER.

Senator BLAIR. How many passenger cars has the Northwestern road equipped with these appliances?

Mr. SCHROYER. About seven hundred passenger cars.

The CHAIRMAN. How many freight cars has it?

Mr. SCHROYER. Forty thousand. The point that I would like to talk about is the mechanical department only. If we were compelled to equip 25 per cent. of our cars, or 20 per cent. of our cars, each year it would compel us to equip 20 per cent. of forty thousand cars, eight thousand cars, the first year. It would be a burden that we could not perform, a burden we could not do in our department.

Mr. COOK. Just explain the reasons, on account of the lack of material or labor.

Mr. SCHROYER. On account of the lack of material and skilled labor.

The CHAIRMAN. And money?

Mr. SCHROYER. Money first, as it would cost from \$90 to \$100 per car to make these changes. Eight thousand cars at a hundred dollars is \$800,000 the first year.

The CHAIRMAN. Practically putting nearly \$1,000,000 into the business in one year?

Mr. SCHROYER. Yes, sir.

The CHAIRMAN. Supposed there was a law passed requiring that this transformation should all take place within six years, do you think the demand would be such and the certainty that the work had to be done would be such that it would result in the construction of shops and machinery and proper arrangements for the manufacture of these things as fast as they would be required?

Mr. SCHROYER. If it were compulsory there certainly would.

The CHAIRMAN. The material and the skilled labor can be found somewhere?

Mr. SCHROYER. Yes, sir; in six years.

The CHAIRMAN. In time to complete the work in that period?

Mr. SCHROYER. We would condemn from our service probably 8 per cent. a year of the present equipment, those being of the older cars. If the first year after the enactment of a law of that kind we equipped 10 per cent. of the remainder, we would have 18 per cent. of those cars disposed of, 8 by condemnation and 10 by equipment. If in the second year we equipped a certain number we could probably accomplish the same results, but I do not see that we could equip our cars in less than eight years. I do not see how we could do it.

The CHAIRMAN. And you can do it as rapidly as any other road, perhaps, being a large road, and all that?

Mr. SCHROYER. Yes, sir; I expect we could.

The CHAIRMAN. The Pennsylvania has about 100,000 cars, and about 10 per cent. of its freight cars are now equipped, and the testimony of Mr. Roberts was that he was very much against any legislation, thought it impracticable and unnecessary, as the main lines were doing everything in their power already, but said, as Mr. Cook has, that his road was going right on as fast as they could without reference to legislation.

Mr. SCHROYER. That is what we are doing. Since the adoption of the Master Car Builders' type of bar we have gone along putting that bar into service and equipping the cars with the automatic air-brake.

The CHAIRMAN. The testimony of Mr. Brown, of the Chicago, Burlington and Quincy, was that they have an order out now for six thousand six hundred and sixty-six cars with these improved appliances.

Mr. COOK. Did he say how long it would take them to have the order filled?

The CHAIRMAN. No, sir; I do not think I asked him that question. He said the couplers were way behind. I gathered from his statement, I think, that within a year they had set aside \$400,000 for the equipment of the cars, and that that sum would just equip six thousand six hundred and sixty-six cars.

Mr. SCHROYER. In legislation of this kind all classes of cars are included. Now we are having some new flat cars built, and when the general manager asked my opinion as to the advisability of having the air-brake put on the flat cars I advised him not to do it, for the reason that the present practice is to put all cars equipped with the air-brake next to the engine, whereby the train can be controlled. With the flat cars equipped with air-brakes, and next to the engine, we would undoubtedly crush those cars with the train by having air-brakes on them. For that reason we should not be compelled to put air-brakes on flat cars, as the only strength we have in those cars is the floor timbers, while in the ordinary freight-cars we have the floor timbers and the superstructure too.

The CHAIRMAN. Now, on what do you have brakes put on?

Mr. SCHROYER. We have brakes put on everything except flat cars.

The CHAIRMAN. Any car except a flat car?

Mr. SCHROYER. Yes, sir.

The CHAIRMAN. Would it be entirely proper to put the air brake on the flat cars.

Mr. SCHROYER. I think it would be an element of danger on the flat car.

The CHAIRMAN. Some gentleman who appeared before the committee yesterday stated that he thought it would be wrong to use the word "automatic" at all in connection with any legislation in reference to brakes, that there were some brakes which were not automatic, and that that provision in the bill would restrict the railroads to a particular sort of device. The whole subject before the committee, as I understand it, is narrowed down to the question of the wisdom of enacting such legislation. We all recognize the importance of having these modern devices, which give greater security to life and property adopted by the railroads, and as rapidly as possible. The only question, it seems to me, for the committee to consider is whether these appliances are going to be put on these cars as rapidly as possible without legislation, or whether any legislation is necessary in the interest of the protection of life and property, especially life and limb, and if anything is done in the way of legislation, whether the roads can comply with it in five, six, or seven, or four years, as the case may be.

Mr. SCHROYER. As I understand the matter, there are a great many automatic bars in the country, all claiming to be automatic, but which will not work at all with safety with the present Master Car Builders' standard type of bar, and which they have been to a vast amount of labor in getting to where it now stands. It is a different type of bar. There are to-day automatic types of bars, link and pin bars, but they

are an entirely different type from what the Master Car Builders' Association have adopted.

The CHAIRMAN. Let me read this provision of Mr. Coffin's bill :

That it shall be unlawful for any corporation, company, person, or persons operating any line of railroad, or for any car or transportation company using or leasing freight-cars engaged in interstate commerce, to put into such use any new cars, or cars that have been sent to the shops for general repairs, or when either of whose draw-bars need to be replaced with new ones, that are not equipped with safety automatic couplers or draw-bars, such as will not necessitate the going in between the ends of the cars to couple or uncouple them, but which will automatically couple themselves, and can be uncoupled from the sides of the cars.

Mr. SCHROYER. We can equip our cars with an automatic draw-bar which will not work with any other bar on the market to-day, of the Master Car Builders' type. The type of bar of the Master Car Builders I believe to be the best bar that could be put in the service.

The CHAIRMAN. Do you think that, under that section of Mr. Coffin's bill which I have read, there would be that sort of discretionary power used, or might be used, by the railroads, which would result probably in the adoption of some coupler which would not do at all.

Mr. SCHROYER. It would complicate matters to a greater extent than to-day.

Mr. COFFIN. I stated before the committee that I thought the self-interest of the roads, as indicated by the Master Car Builders, would lead them to uniformity in this matter. The majority of the roads have already decided on that, and some of them are equipping their cars with them.

The CHAIRMAN. Section 7, of Mr. Coffin's bill provides :

SEC. 7. That whenever any railroad company, corporation, person, or persons engaged in the transportation of interstate commerce, or any railroad shall have equipped their rolling-stock, either prior to or by the time of the dates fixed in this law, with such automatic safety appliances as contemplated in this act, such corporation, company, person, or persons may lawfully refuse to receive cars for transportation over their own lines, or for switching purposes, from lines of connecting roads, that are not equipped with such automatic safety appliances as will work, interlock, and interchange automatically with the system of automatic couplers and brakes in use on its own rolling-stock.

Mr. COFFIN. I design in that to lead to uniformity. That is my design. As I stated before the committee, I think, while we might be able to convince the Commission that there would be no monopoly created by setting out in so many words the master car-builders' coupler, still I was afraid that we could not get a majority in the House and Senate.

Mr. COOK. I should object to that for this reason——

The CHAIRMAN. I would not put——

Mr. COOK. They have not got to perfection, and I would not want to stereotype it where it is.

Mr. COFFIN. Leave it in the hands of your men who know no more about it than anybody else. These other bills provide for a commission.

The CHAIRMAN. I think that is all gone by. Now, Mr. Schroyer, your criticism of this bill—and I think the other two bills are practically out of the question—is that it is too general?

Mr. SCHROYER. Too general; yes, sir.

The CHAIRMAN. It leaves the thing open in such a way that they may take advantage of it if a road wants to, and adopt an automatic coupler that would be of no account?

Mr. SCHROYER. Yes, sir.

The CHAIRMAN. And therefore would involve the roads which put on good ones in trouble?

Mr. SCHROYER. Yes, sir.

Mr. COOK. You will obviate that by saying that they shall be such couplers as will couple with all automatic couplers which have these contour lines, which will couple interchangeably.

Mr. SCHROYER. In that bill you ignore all mention of the action which had been taken by a two-thirds vote of the cars represented in the Master Car Builders' Association. You know of the discussion which has taken place in the New England Club on the question of automatic couplers. They favored a link and pin bar. No road which has used the automatic bar but did it experimentally. There is an inclination on the part of the trainmen who handle cars with these bars to find out just what they will stand. You know that, Mr. Coffin.

Mr. COFFIN. I know that.

Mr. SCHROYER. And when they have the experiments in the yards they will hit them as hard as they can. The result has been very disastrous in the northeastern country.

Another point is that in the construction of these bars originally they were gotten out as cheaply as possible, regardless of the quality of the material used. They commenced at the bottom to build up rather than to use the better class of bar or better material at an increase in the original cost. Their experience has been disastrous with those bars, as ours was. But now of two thousand three hundred bars which we have now in service, we have had up until the 13th day of this month, in two thousand three hundred cars, six broken bars and six broken knuckles. That is very much below the cost we have had of maintaining the old bars.

Now, if that bill were to become a law, leaving it discretionary with the railroad companies as to what kind of bars they will adopt, at the end of five years you will not be any better off than you are to-day. If the master car-builders' work in this direction is worth anything it is certainly worth enough to be recognized in this bill.

The CHAIRMAN. On the other hand, if we confine it to what the master car builders now consider the right thing, would we not get them in a groove and retard further progress? Something a great deal better may be discovered inside of six months.

Mr. SCHROYER. No; then you anticipate that somebody will discover something?

The CHAIRMAN. The question is whether the bill should not be open enough and broad enough to allow improvements to go forward.

Mr. SCHROYER. That is a fact. But should it not be close enough to prevent difficulties which are now existing?

The CHAIRMAN. That is the question.

Mr. SCHROYER. We can put on an automatic bar for about 25 per cent. of the original cost of the bars that we are now putting on.

Mr. COFFIN. You will not do it, of course, and will not other roads be like you?

Mr. SCHROYER. We will not do it. Other roads will not be like us for the reason that to-day we have fifty-eight different patterns for draw bars in a barn loft, all of which we are using on foreign cars. It is frequently the case that a foreign car will remain in the yards two weeks, so that we can get the patterns to the foundry, have the castings made, and get them ready for use. Now if convenience and facility in repairing, and in the interchange of these cars cut as much figure as they should, the roads would be governed to a greater extent by the action of the Master Car Builders' Association in this respect.

The CHAIRMAN. Now?

Mr. SCHROYER. Yes, sir; but they are not. The only thing that I can see to do is to frame a bill which will harmonize with the work done by the Master Car Builders' Association, whose plan was adopted by a two-third vote of all the cars represented in the association.

The CHAIRMAN. Then when you get that bill and the railroads go on and spend their \$100,000,000 in equipping the cars accordingly, and something very much better comes out in a little while, what is to be done? The same laboring element which is now asking legislation would say that "the old Janney coupler is a nuisance, and lots of us are killed and maimed by it, and we want an act of Congress to get a better arrangement."

Mr. SCHROYER. That is true, only it is anticipation.

The CHAIRMAN. Of course.

Mr. SCHROYER. But the other point that I make is in relation to difficulties which actually exist to-day, and which, to my idea, this bill will not prevent.

The CHAIRMAN. A gentleman by the name of Mr. Loughridge, of Philadelphia, was before us yesterday, and he stated that since this agitation had been started, since these bills have been introduced and the hearings have been going on, everybody has got a new invention, everybody wants to come in and exhibit his invention.

Mr. SCHROYER. I will show you the result of the vote. Here it is: 443 against 25; 338 against 127; 408 against 67; 347 against 128; 407 against 51.

The CHAIRMAN. In view of the difficulties which are presented by you, your judgment is that if any legislation is enacted it ought to prescribe the sort of appliance which shall be used?

Mr. SCHROYER. The type of appliances?

The CHAIRMAN. The type of appliance that shall be used?

Mr. SCHROYER. Yes, sir.

The CHAIRMAN. Now, in view of what seems to me to be doubtful legislation, to prescribe what shall be used, because the testimony before us is that in old countries—take Germany, for instance—where the Government owns the road and puts on the cars whatever they please, they are far behind everybody else in other countries; now, then, in view of this state of facts, what is your judgment, that the bill shall or shall not pass?

Mr. SCHROYER. I think it should not.

The CHAIRMAN. Prescribing any time at all.

Mr. SCHROYER. Prescribing any time. I think it will work itself out.

The CHAIRMAN. But if one does pass, how long time do you think ought to be given?

Mr. SCHROYER. Ten years.

Mr. COOK. I think Mr. Coffin knows that the legislation in Michigan complicated the matter.

Mr. COFFIN. I so stated before the committee, and also in Massachusetts and Connecticut, and in New York.

The CHAIRMAN. Would you object to the suggestion of Mr. Cook that a law, if any one should pass at all, should be a law prescribing that all new cars should have these modern appliances attached to them, and that a railroad purchasing old cars should also use them?

Mr. SCHROYER. I would modify that somewhat and exclude flat cars. I do not think it would be a safe practice to put a power brake on a flat car.

The CHAIRMAN. I assume from what you state it would probably not be a good thing to do.

Mr. COFFIN. I want to ask Mr. Schroyer a question. Is it not the fact, or is not in your judgment, that unless we have some law that requires other companies to equip their cars the same as our law now requires you, that you will have a great many cars that will be more dangerous to couple with your cars having automatic couplers, than it would be otherwise, and in justice to you ought not other roads be made to do as you do—put on safety appliances?

Mr. SCHROYER. Yes, sir.

Mr. COFFIN. Will they do it unless we have a law of this kind?

Mr. SCHROYER. I think they will. I know roads the mechanical departments of which are bitterly opposed to the use of the M. C. B. bar, but they are putting them on by order of the general officers of the road. They are compelled to do it against their own will, and in that bill framed as you have it now I am totally at a loss to know how you are going to overcome the difficulty you are aiming at. If the bars were not so radically different the conditions would all be changed. But you can not make a link and pin bar work with an automatic bar.

Mr. COFFIN. In applying power brakes, does it not necessitate close coupling?

Mr. SCHROYER. It does not absolutely necessitate a close coupling, but it is very much preferable to have a close coupling.

The CHAIRMAN. There are two propositions in this bill, one is the automatic coupler and the other is the power brake. Which is the more important in the interest of life and limb and property?

Mr. SCHROYER. I believe that the coupler is the more important as regards the loss of life and limb, but at the same time that is questionable. I believe that the automatic brake would be the best so far as a saving in money is concerned in operating our cars, but I believe with the use of both that men will take greater chances than they do to-day. I know that to be the case on our road.

The CHAIRMAN. In what way?

Mr. SCHROYER. They will run closer on trains. They will not endeavor to make the stops they would if they were using the hand-brakes.

The CHAIRMAN. Which, by carelessness, makes a greater liability of loss and damage to life and limb and property?

Mr. SCHROYER. Yes, sir.

The CHAIRMAN. That is their own fault, it seems to me.

Mr. SCHROYER. It is my opinion that in eight cases out of ten the loss of life and limb now on the part of switchmen is due to their own carelessness.

At 2 o'clock p. m. the committee adjourned.









AUTOMATIC COUPLERS AND POWER BRAKES.

HEARINGS

BEFORE THE

COMMITTEE ON INTERSTATE COMMERCE

OF

THE U. S. SENATE

IN RELATION TO

The bill (S. 811) for the protection of property, trainmen, and other railroad officials in handling locomotive engines, freight trains, and freight cars engaged in interstate commerce; the bill (S. 893) providing for the adoption and use of a uniform standard automatic car coupler, and regulating the operation and control of freight trains used in interstate commerce, and providing for the greater safety of railroad employes, and for other purposes; and the bill (S. 1618) to promote the safety of employes and travelers by compelling common carriers engaged in interstate commerce to equip their cars with automatic couplers and continuous brakes, and their locomotives with driving-wheel brakes.

WASHINGTON:

GOVERNMENT PRINTING OFFICE.

1892.



AUTOMATIC COUPLERS AND POWER BRAKES.

HEARINGS

BEFORE THE

**COMMITTEE ON INTERSTATE COMMERCE OF THE U. S. SENATE
IN RELATION TO THE BILL (S. 811) FOR THE PROTECTION OF
PROPERTY, TRAINMEN, AND OTHER RAILROAD OFFICIALS IN
HANDLING LOCOMOTIVE ENGINES, FREIGHT TRAINS, AND
FREIGHT CARS ENGAGED IN INTERSTATE COMMERCE; THE
BILL (S. 893) PROVIDING FOR THE ADOPTION AND USE OF A
UNIFORM STANDARD AUTOMATIC CAR COUPLER, AND REGU-
LATING THE OPERATION AND CONTROL OF FREIGHT TRAINS
USED IN INTERSTATE COMMERCE, AND PROVIDING FOR THE
GREATER SAFETY OF RAILROAD EMPLOYÉES, AND FOR OTHER
PURPOSES, AND THE BILL (S. 1618) TO PROMOTE THE SAFETY
OF EMPLOYÉES AND TRAVELERS BY COMPELLING COMMON
CARRIERS ENGAGED IN INTERSTATE COMMERCE TO EQUIP
THEIR CARS WITH AUTOMATIC COUPLERS AND CONTINUOUS
BRAKES, AND THEIR LOCOMOTIVES WITH DRIVING-WHEEL
BRAKES.**

WASHINGTON, D. C., *February 10, 1892.*

The committee met at 10 o'clock a. m.

**Present: Senators Cullom (chairman), Wilson, Hiscock, Higgins,
Chandler, Harris, Gorman, and Jones.**

STATEMENT OF W. E. RODGERS.

Mr. RODGERS. It may be proper to say, Mr. Chairman, that I appear here in consequence of having been appointed a member of what is known as the National Committee on Safety Appliances, at the last general Convention of the Railroad Commissioners of the United States that was held here in Washington on the 4th of last March. Under a resolution the convention provided that the committee should give a hearing to railroad companies and to accredited representatives of labor organizations, with a view of framing a bill and submitting it to Congress as soon after its opening session this year as possible, to compel the adoption of an automatic safety car coupler and certain other things, namely, the compelling of the equipment of engines with driving brake and certain other matters that are not so important. At least I will not speak of them at present.

I do not know how familiar the various members of this Committee may be with the car-coupling question. I, therefore, in a few words, will rehearse to you briefly the situation in the United States to-day.

In consequence of the large number of employes of railroads who are injured or killed in this dangerous occupation the subject was taken up by the various State legislatures, beginning about ten years ago by the passage of laws in the different States requiring railroad companies within the respective States to equip their cars with an automatic coupler. Massachusetts was one; New York was another. And so far as New York is concerned, I am very familiar with what took place. Acts were passed compelling the adoption of one of several couplers. A time was set within which the corporations were to conform to this act. The result was that one railroad would adopt one coupler, another would adopt another coupler, and the result was confusion confounded. In consequence of the interchange of cars from one State to another the fact was soon developed that a car coming from Ohio into New York equipped with one coupler would not couple with the coupler that had been adopted by the railroad that it found in the State of New York, and thus the dangers became greater.

The CHAIRMAN. Greater injuries were inflicted?

Mr. RODGERS. Yes, sir. The railroad commission of the State of New York, eight years ago, in hopes of clearing up the situation somewhat, gave widespread advertisement to the fact that upon June 6, as I remember the date, it would make an investigation and trial of different car-couplers then in use. I conducted that investigation myself. There were a vast number of cars, equipped with different devices, at the yard of the New York Central Railroad in Albany, and we spent two days in making a test of the merits of the different couplers.

The result was that a careful report was made, setting forth, in the opinion of the board what coupler was the best. The board then thought that on the whole it would be better to adopt a coupler which would couple automatically with the old link and pin; and with that idea in view it recommended as its first choice a device which would couple automatically with the old link and pin, provided there was a "chop," as it is technically called, in the drawhead to prevent the link from going back.

Senator HARRIS. What board was that?

Mr. RODGERS. The board of State railroad commissioners.

The State commission of Massachusetts took the same action, and they recommended other couplers. The result was that there was very little improvement in the conditions. The recommendations of the board were not compulsory. Indeed, we did not desire that they should be, and the railroad corporations went on adopting first some one and some the other.

Finally, the Master Car Builders' Association, which I presume you are familiar with, which consists of delegations of master car-builders from the different railroad corporations in the United States, in which each corporation or representative is given a vote proportioned to the number of freight cars in the company which he represents,—and consequently, it is a pretty fair test of the opinion of the railroad corporations as to any device which the association adopts—shortly after this trial that I alluded to in Albany, adopted a resolution to the effect that what is termed the "vertical-plane" coupler made in its opinion the best coupler.

The vertical-plane coupler, I may say in a word, for the benefit of those who may not be familiar with the facts, consists in a hook coupler with knuckles, which go together somewhat in the way of the hand, and, in fact—

The CHAIRMAN. We have had a model here.

Mr. RODGERS. I did not know how familiar you were with it.

Senator HIGGINS. Some of us know nothing about it.

Mr. RODGERS. The Master Car Builders' Association, after having had a number of tests, after having had this vertical-plane coupler placed upon a large number of cars in the United States, thus securing a practical test of its efficiency, reached the conclusion that the Master Car Builders' type was the best type.

The CHAIRMAN. Is that a patent?

Mr. RODGERS. No, sir; the type is not. There are a large number of patents upon the type, depending upon the manner in which the knuckle is closed and held in position, but the general method of closing is not a patent.

Senator HIGGINS. Nor patentable?

Mr. RODGERS. That I do not know; but I am safe to say, am I not, Mr. Ely, that the type is not patented, but whether it be patentable or not, I do not know. I suppose not.

Mr. ELY. Oh no, it is not.

Mr. RODGERS. I will give the advantages claimed in a word. I am not going now into the respective merits of the various types, unless you desire to hear it. I am familiar with them, and will do so, if you wish.

I merely wish to say that these people, the master car-builders and others, for that matter, who are better able to judge than anybody else, reached that conclusion. The direct advantages of them, these couplers, I may mention, are these: They make a fast coupling, so that when the train starts the only slack given is that due to the spring in the drawhead, whereas the old link-and-pin coupler, as one car was started, of course there was much greater slack, and it was very apt to snap the link.

Previous to the test of brakes at Burlington it was supposed that a heavy freight train could not be started without this slack. It was a strong argument in favor of the link-and-pin coupler. But in consequence of this brake test in Burlington it was developed that the spring in the drawhead was sufficient to admit one car being started after the other in succession, even if it was only an inch. The inertia was overcome and the train would be moved along.

Now there is a very great advantage in that, because it admits better of power brakes being used. When the automatic coupler is used there is a fast coupling. With the old link-and-pin coupler it was so long that it was very liable to be broken. So the adoption of the Master Car Builders' type carries with it very much greater practicability of adapting the air brake also.

Then after the adoption of the resolution by the Master Car Builders' Association, one after another of the railroad corporations of the United States wheeled into line, and reached the conclusion that the Master Car Builders' type was the most practicable one, and they determined to adopt it.

After this committee was appointed at the last meeting of the Railroad Commissioners of the United States, of which I am a member, it held a hearing, issued circulars to various railroad companies and bodies of organized railroad employes throughout the United States, inviting them to appear before it on the 10th day of November last, in the Chamber of Commerce in New York. It also called for a variety of information, and a great amount of this information was gathered and put in shape by Mr. Moseley, the secretary of the Interstate Commerce Commission, who acted as the secretary of our committee. On your thumb

mail, the result of this information was that there were about a million freight cars in the United States; that there were about 160,000 miles of railroad, of which 125,000 approved of the Master Car Builders' type. At the hearing before the committee in the Chamber of Commerce there were representatives from a large number of railroad companies; also from a large number of organizations of employees of the railroads of the United States. At that meeting, also, there appeared a committee representing the American Railway Association, which is an organization of railroads representing 125,000 miles of railroad in the United States, which committee, of which Col. Hains is chairman, and there is a member of it here now, Mr. Ely, of the Pennsylvania Railroad, expressed their approval of the Master Car Builders' type as against any other type. There was some opposition at that meeting to the Master Car Builders' type, but I think it was restricted to the upper part of New England, and came from the Boston and Maine railroad.

The CHAIRMAN. The committee will now take a recess until 1:30.

Thereupon, at 12 o'clock m. the committee took a recess until 1:30 p. m. At the expiration of the recess the committee resumed its session.

Mr. RODGERS. Mr. chairman and gentlemen, at the time of the recess I was just at a point in the narration of the situation where the committee had been appointed by the convention of the railroad commissioners of the United States, and had issued their circular calling for information, that the information had been received and compiled into shape by Mr. Moseley, secretary of the Interstate Commerce Commission. As I say, at the hearing that was had in the Chamber of Commerce on the 10th day of November before this committee on safety appliances the representatives of the railway association appeared and expressed themselves as in favor of the Master Car Builders' type—not of any particular patent, but of the Master Car Builders' type.

Senator HARRIS. Is that an association of railroad companies or of constructors?

Mr. RODGERS. Of railroad companies. The American Railway Association is the successor of the time convention. That was an association of the representatives of railroad companies, with a view to formulating rules for the operation of trains, for the management of cars, and such other matters as required the concurrent action of the railroad companies.

This association, or its representatives, appeared before the committee and approved of the Master Car Builders' type of coupler, but deprecated any legislation upon the subject on the ground, first, that they were equipping their cars as fast as they could, and secondly, that the coupler had not been perfected to the extent to justify compulsory legislation at this time.

At that meeting there were people representing other interests, notably a delegation from what is known as the Switchmen's Union, which comprises in its membership a large number of people engaged in the practical coupling of cars. These gentlemen, or their representatives, to the astonishment of the committee, professed a disinclination to the adoption of any automatic coupler. Upon close questioning, however, it appeared that their disinclination resulted from the dangers incident to the transition period; that while there was a coupler of one shape, and another of another shape, and another of another, the difficulties of coupling were greater than with the old link-and-pin coupler. It was also stated to the committee in a semi-private way, which I say publicly, that part of this opposition, a feature of it, was that these men

feared that if an automatic coupler were adopted there would be less demand for the expert services incident to the coupling of cars than at present. How much weight there is in that I do not know.

Senator WILSON. From what source did that objection come?

Mr. RODGERS. From the representatives of the Switchmen's Association of the United States, which is an organization of men engaged in this dangerous occupation; and, as I say, upon close questioning, and the testimony, which I suppose is before you, will show—

Mr. MOSELY. The committee have it all.

Mr. RODGERS. This fact was elicited. However, if an automatic uniform coupler was adopted and put into universal use, they admitted that the dangers incident to coupling would be reduced very much, if not to an absolute nullity.

Then, after the committee heard these various views expressed, it had a meeting at the Astor House with a view of formulating a bill to be presented to this Congress in conformity with the resolution creating the committee. Unfortunately the chairman of the committee, Mr. Crocker, had not reached a conclusion that was satisfactory to himself, and the committee adjourned on the night of November 11 without formulating a bill.

The CHAIRMAN. November 11, 1891?

Mr. RODGERS. Yes, sir; November 11, 1891. Thirty days elapsed, and I saw in the newspapers that the chairman of this committee had introduced a bill, which, in my opinion, was open to some objection, and I wrote to him requesting that the bill be not reported until the committee on safety appliances, of which I am a member, had had an opportunity to appear, or to agree upon a bill and present its views. Thirty days more elapsed and the committee was not called together. No bill was offered except one from Mr. Smith, of Iowa.

The CHAIRMAN. You mean your committee?

Mr. RODGERS. Yes, sir; the committee on safety appliances. No bill was presented except the one of Mr. Smith, of Iowa, and the one I presented for the consideration of the committee.

It seemed to me that the time had come when our committee, or some member of it, should present the result, at all events, of the investigations of the committee, and with that idea in view I transmitted to the chairman of this committee my views embodied in a bill which he introduced in the Senate, and which is to be found on the files. It is the second bill from the last on your files, namely, Senate bill 1618, to promote the safety of employes and travelers by compelling common carriers engaged in interstate commerce to equip their cars with automatic couplers and continuous brakes, and their locomotives with driving-wheel brakes. It is proper that I should say that the bill represents my personal views as a member of the committee, not the views of the committee, because they have not as yet expressed any views. The bill represents my personal views, resulting from the investigations of the committee and my previous investigation and trials in the matter.

Now, I shall invite your attention for a moment to the consideration of that bill. It is short; it certainly has that merit. It provides in its first section that after January 1, 1897, no common carrier shall haul, or permit to be hauled, any freight car engaged in interstate commerce unless such car shall be equipped with automatic couplers, so constructed as to couple by impact with the next car without the necessity of a person going between the cars, and so constructed as to be uncoupled without the necessity of a person going in between.

The next section provides that no common carrier shall haul, or permit

to be hauled, any car after January 1, 1897, unless that car is equipped with brakes that can be set and unset at any time from the locomotive hauling the train on which the car is.

The third section provides that locomotives shall be equipped with driving-wheel brakes; and a proviso is inserted that it shall be lawful, in case of accident or other emergency, to temporarily dispense with the use of automatic couplers, or continuous brakes, or driving-wheel brakes.

The fourth section provides that any carrier violating any provisions of the act shall be liable to a penalty of \$100 for each and every violation, to be recovered in a suit to be brought in the district court of the United States having jurisdiction in the locality where the violation shall have been committed by the United States district attorney of such locality, and it is the duty of the district attorney to bring such suit upon duly verified information being lodged with him of such violation having occurred.

The fifth section gives the Interstate Commission in special cases the power to extend the time for compliance with the provisions of the act for a period not exceeding two years.

The bill is modeled upon the statute in existence in the State of New York in regard to the same subject.

The CHAIRMAN. If that bill were adopted and became a law would this danger, which now exists on account of the variety of couplers, be avoided?

Mr. RODGERS. I think it would be avoided for this reason: While the bill does not specify what the coupler shall be, the theory upon which the bill is drawn is that the Master Car Builders' type has proved itself by the law of the survival of the fittest to be the one that will be adopted.

Senator HARRIS. About how many automatic couplers have been invented?

Mr. RODGERS. The name is legion.

Mr. ELY. There are 7,000 patents. I think there are about 10,000 of these devices.

Senator HARRIS. About what proportion of the cars are now equipped with automatic couplers?

Mr. RODGERS. The statistics developed by the circulars of the committee show that of the Janney type there are 40,231; of the Gould, 23,357; of the Hinson, 42,061; and those of the Master Car Builders' type, not otherwise designated, 13,279; making a total of 118,928.

Senator CHANDLER. Cars?

Mr. RODGERS. Yes, sir.

The CHAIRMAN. Is there any difficulty in having those couple together so as to avoid this danger which occurs from using different kinds of couplers?

Mr. RODGERS. No, sir. Among the Master Car Builders' type each one of these couplers will couple with any other of the same kind of type.

Senator HARRIS. There are 118,000 cars equipped with couplers of the Master Car Builders' type?

Mr. RODGERS. Exactly.

Senator HARRIS. What proportion is that to the number of freight cars in use at this time?

Mr. RODGERS. There are 978,161 freight cars. In round numbers it is about 12 per cent.

Now, it may be proper to say that the idea occurred to attempt to

legislate into existence a specific type of couplers, namely, the Master Car Builders' type, to define it in terms. There are a good many practical difficulties about that, and there were many objections to it, and it seemed to me, and it seemed best to those with whom I have conferred upon the subject—and there have been a great many people with whom I have conferred—to simply provide in the bill that the car should couple and uncouple by impact automatically, and that it would carry with it, in consequence of the start that the Master Car Builders have over all others, the final adoption of the Master Car Builders' type.

Now, I think it is clear that if any legislation upon this subject is enacted it ought to be—

The CHAIRMAN. I will ask you whether, in your opinion, it is or is not best to pass any law on the subject? I ask that question because many argue that it is best not to enact any legislation, many railroad men more especially, perhaps.

Mr. RODGERS. I think there is a fair opportunity for a difference of opinion there, but my opinion is that a bill can be enacted without doing harm and which will do good; that on the whole the balance in the way of expediency is in favor of the enactment of a bill of this kind rather than to let the matter go; and briefly for this reason: There is a number of progressive companies in the United States who are equipping their cars with automatic couplers as fast as they can do so. These companies deprecate legislation on the subject for the reason that they say they are doing as well as they can anyhow, and legislation is only in the way of a spur that will be annoying without being beneficial. And there are a great many other corporations who are not progressive, and who are not doing anything, and who will not until they are compelled to. It has been admitted that such is the fact.

The CHAIRMAN. They have run along on the old link-and-pin arrangement?

Mr. RODGERS. Yes, sir.

Senator HARRIS. Is it or is it not true, as a general rule, that railroad companies, under their responsibility at common law, which requires them to use the best appliances that can be used, are adopting the best couplers, as well as the best appliances of every other description, as rapidly as in the nature of things they can?

Mr. RODGERS. I do not think they are.

Now, you might say with regard to the steam-heating of cars that they would have gone on and adopted some other method of heating their cars than by having stoves in the cars without compulsory legislation. In point of fact they do not; and it was not until the State of New York, followed by other States, enacted compulsory legislation upon that subject that the railroad companies adopted steam heating. Now they are adopting it very rapidly. All over the State of New York they have adopted it, and a large majority of the trunk lines in the State have adopted it because they could not get their cars in the State without it.

One word with regard to the merits of the Master Car Builders' type as against any others. I will not take up your time by going into a dissertation of the mechanical features of the Master Car Builders' type as compared with others, but I am satisfied that if this bill is enacted into law the Master Car Builders' will be adopted, because it has the start so much beyond any other that no other one can hope to catch up, and if this bill is enacted into law I believe that railroad companies will be constrained to pay attention to the operation of the details of

this coupler in a way that if there was not any compulsory legislation they would not do.

The CHAIRMAN. Suppose your bill, Senate bill 1618, were passed and becomes a law. Will there be, under any circumstances, any necessity for a switchman to go between the cars at all in order to couple or uncouple the cars?

Mr. RODGERS. If they adopt the Master Car Builders' type there will not be. The law provides that there shall not be. They have to adopt a coupler with such details that it will not. That is put in in terms.

The CHAIRMAN. That bill does not say the "Master Car Builders' type," as I remember it, but it says "an automatic coupler."

Mr. RODGERS. Yes, sir.

The CHAIRMAN. Now, if the technical provisions of that law are preserved, the railroads in all cases will be required to provide such a coupler as will obviate the necessity of the switchman going between the cars?

Mr. RODGERS. They will; that is in special phraseology:

Shall be equipped with automatic couplers so constructed as to couple by impact with the next car without the necessity of a person going between the cars, and so constructed as to be uncoupled without the necessity of a person going between the cars.

Senator CHANDLER. What is the objection to requiring a person to go between the cars to uncouple them? Where is the danger in uncoupling?

Mr. RODGERS. Very little. If a man is between the cars, and there is a movement of the train or something of that sort it would be dangerous, possibly, to be in between. There is a number of devices that enable this uncoupling to take place from the side of the car, and it is better that it should be. I want to anticipate an objection here. In a number of these types there are devices on the side of the car by which the knuckle can be opened when the cars are apart, so that switchmen need not go between the cars, never mind how far they are apart. Of course if the cars are a considerable distance apart and are not moving there is no particular danger. He goes in and opens the knuckle with his hand.

Many of the couplers are so constructed, and there is no objection to that. This phraseology might even prevent him from doing that. That could be altered by saying without the necessity of a person going between the cars when they are within such a distance of each other, say 10 feet of each other, which might meet that objection. But there is a number of couplers where you do not have to go between the cars at all—where they can be opened, as I say, by a device on the side.

Now, I wish to say a word here. I do not think that it is a desirable thing to enact any legislation looking to the creation of a commission—I do not care how it is composed—that will adopt any specific form of coupler. I say this for the reason that the railroad companies now of their own free will and accord have come nearer to an agreement upon this matter than they are likely ever to come again.

One hundred and twenty-five thousand miles out of 160,000 are in favor of it. The switchmen, a large body of organized laborers, are also in favor of it. Mr. Coffin here represents an organization called the Brotherhood of Railroad Trainmen, which organization represents 175,000—

Mr. COFFIN. No, not in that. There are 122,000 in that organization.

Mr. RODGERS. It embodies a large number of men who are in favor of this, and an enormous preponderance of those interested, whether

employés or railroad companies, are in favor of this Master Car Builders' type, and I have no doubt whatever that legislation, such as is indicated in this bill, No. 1618, will, if enacted, adopt that type. Yet it gives elasticity, it gives railroad companies an opportunity to perfect the details. It does not stereotype anything, and from every point of view that I have investigated the matter, it seems to me that a bill such as I have presented here is the least objectionable from the point of view of the railroad companies, and likely to be most efficacious from the point of view of the trainmen.

The CHAIRMAN. I want to say that the first bill I introduced was more to get the subject before this committee and to draw out expressions from various interests connected with railroading, so as to arrive at what was the best thing to do if we decided to report anything.

Mr. MOSELEY. I would like to call Mr. Rodgers's attention to a statement he makes, and that is with reference to compiling these statistics which he has obtained from the replies to the inquiries sent out to railroads, that but seventeen roads representing but 11,915 miles have expressed themselves in favor of the Master Car Builders' type.

Mr. RODGERS. That is true so far as our circulars are concerned. My statement was based upon the statement, before the committee, of Col. Hains and Mr. Ely, representing the Railroad Association of the United States, which appeared before the committee at that hearing, and represented themselves as representing 125,000 miles. Is not that true, Mr. Ely?

Mr. ELY. I do not remember.

Mr. MOSELEY. I never knew that the railroads, representing 125,000 miles of road, have expressed any opinion in regard to the matter, and the only opinion I ever knew was the one which is here.

Mr. RODGERS. That is so, so far as these statistics are concerned. My statement is based upon the statement of Col. Hains, who represented the Railroad Association of the United States before our committee, and which association was in favor of the adoption of the Master Car Builders' type. I think Mr. Coffin was there.

Mr. MOSELEY. One hundred and twenty-five thousand miles of road were the only ones that replied to the circular of the Commission, and of that but 11,900 stated that they were in favor of the Master Car Builders' type.

Mr. RODGERS. That is, true, Mr. Moseley. I repeat that Col. Hains, representing that large organization, represented that they expressed themselves in favor of the Master Car Builders' type, but refused to recommend compulsory legislation for the reason I have given, and the number of miles I have represented was 125,000.

I think I have indicated and expressed, so far as I can think of them, the reasons why it seems to me if any bill at all is adopted it should be such a one as is to be found in Senate bill 1618.

Senator JONES. If it is not out of order, I would like to have the balance of Mr. Moseley's statement. He stated that he sent out circulars to 125,000 miles of railroad, and only about 11,000 expressed themselves in favor of the Master Car Builders' type. I would like to ask him the question as to whether any of these 125,000 miles of railroad expressed themselves against it?

STATEMENT OF EDWARD A. MOSELEY.

Mr. MOSELEY. In answer to the Senator, I desire to state that under the direction of this committee a circular was sent to every railroad in the United States. Railroads of 125,000 miles out of a total mileage of over 160,000 miles in the United States answered.

Of these roads, as to the question of the best means of bringing about uniformity in safety car-couplers, sixty-nine roads, representing 13,000 miles, are in favor of national legislation. Eighty-eight roads, representing 46,791 miles of road operated, are in favor of voluntary action by the railroads.

The CHAIRMAN. And against any legislation?

Mr. MOSELEY. Yes, sir; we so understand it. Two roads, representing 139 miles, want State legislation. Seventeen roads, representing 11,915 miles, are in favor of the Master Car Builders' type of coupler. Ten roads, representing 4,829 miles, are in favor of different couplers; so many that I have not classified them. Fifteen roads, representing 9,447 miles, expressed the opinion that the matter is still in an experimental stage, while 145 roads, representing 38,985 miles, have expressed no opinion in regard to the best means of bringing about uniformity in automatic couplers. The Atchison, Topeka and Santa Fé Railway Company and its auxiliary lines, together with one other road, express themselves in favor of what is known as the Safford coupler.

I want to say, Mr. Chairman and gentlemen, that the members of the committee appointed by the National Convention of Railroad Commissioners, of which Mr. Crocker is chairman, are, for various reasons, unable to attend this meeting. Mr. Crocker, however, has called a meeting to take place on next Tuesday in advance of another hearing which I understand this committee will give them on the following day. At that time there will also be present the committee sent by resolution from the Massachusetts legislature to call the attention of this committee and Congress to the subject. I have also, as secretary of the committee of the national convention, called the attention of all the persons whom I could reach who are at the head of the various organizations of railroad employes, and other persons interested, that they may be present at the meeting next Wednesday. It is the hope of Mr. Crocker that his committee may be able to unite in some action.

Some five years ago, while in the Massachusetts legislature, my attention was called to the manner of safety appliances. A short time after the organization of the Interstate Commerce Commission, under the direction of the chairman, Judge Cooley, who was fully impressed with the importance of the subject, an investigation was made. At that time I believe it was Judge Cooley's idea, and my own also, that the matter was one which could be very easily legislated upon and adjusted. As time has gone on, however, I believe his opinion has very much changed in regard to the matter, and certainly mine has.

I am now speaking not as secretary of any committee, but as a citizen who has paid a great deal of attention to the matter. It is not an easy subject to deal with; there are such great differences of opinion. There is a great difference of opinion among the very men to whose advantage the proposed legislation would inure. The railroad employé, particularly the one who belongs to an organization, has not only his own personal risk to consider, his sympathy appealed to by the loss or injury of a fellow employé, but he has also a pecuniary interest in the

matter, as out of his wages he is called upon to contribute to the relief of those of his organization who may be injured or killed in this service.

At the meeting in New York, Mr. Sweeney, Mr. Hall, and others of the Switchmen's Mutual Aid Association, who are distinctively representative men, and as much so as any other gentlemen who were there, stated that they were opposed to the Master Car Builders' type of coupler, and that the risk was increased by the use of them. I think, as Mr. Rodgers has stated, that the reason of this feeling is largely the difficulty of coupling cars which have different kinds of appliances. I think it far better to have the old and existing state of affairs, the link and pin, than to have a certain number of cars throughout the United States with one kind of coupler and others with another.

Cars are not confined to the particular road for whom they are built, but they go all over the United States, and carry disaster into every freight yard they enter in the attempt to couple them with the old link and pin, while they may work automatically and perfectly with a coupler of their own make.

There are 1,000,000 or more cars in the United States to-day. About 190,000 have some particular safety device; the others have the old link-and-pin couplers. These 190,000 cars are the means, according to my observation, of bringing a great deal of death and injury to the men who are employed in the service. It is far better to retain the old link and pin than it is to allow cars to leave one road and pass from State to State and go across the country equipped with some device which, while it may work perfectly with similar devices, when it encounters the old link and pin and other kinds of couplers, is very dangerous from the difficulty experienced in coupling the cars.

It would appear to me, that a question to which the President has three times called attention, a question to which legislatures are now directing their attention, and a question which has been before this committee repeatedly, is in such a state that some legislation should be had. Any legislation which allows any road to put on any coupler it believes is going to meet the requirements of a law is not going to remedy the evil. Therefore, it seems to me that legislation which would create a board to be appointed by the President to investigate this entire subject, with power to call upon the inventors of safety coupler appliances (of which Mr. Ely states there are 7,000), to bring before them their couplers, having sufficient means to make practical tests, and at an early date report to Congress the result of their investigation with a view to such legislation as might be found necessary and convenient, would be the wisest and safest course to pursue.

STATEMENT OF THEO. N. ELY, GENERAL SUPERINTENDENT MOTIVE POWER, PENNSYLVANIA RAILROAD.

Mr. ELY. Mr. Chairman and gentlemen of the committee, I do not desire to make any extended remarks, but should be glad to be of any assistance that I can to the committee in solving this problem.

Possibly I had better call it "reporting progress," as I was here two years ago on a similar errand, the result of which was printed as part of the hearings of this committee.

We are always glad to know that our predictions have come to pass. In this instance the statistics, which I will give you, will indicate that my prophecy that railroads would proceed without compulsion has

been fulfilled, although I have not been able, in the short time at my command, to gather as complete information as I should have liked.

Before going further I would explain that I am not here as one opposed to anything that will better the situation.

The CHAIRMAN. Will you be kind enough to state what your relation is? Are you connected with the Pennsylvania Railroad?

Mr. ELY. I have charge of the rolling and floating equipment and kindred matters of the Pennsylvania road. This road has of its own volition put on a great many more couplers and air brakes than even a radical law would require; including cars under contract, about 25,000 couplers and 20,000 air brakes have been applied.

In the first place our aim is to reduce casualties as far as possible; and, in the second place, we think there will be an economy of operation in the use of something better than the pin and link.

I desire to be considered as one believing in the application of automatic couplers, and hope that this will be kept in mind in listening to to what I may say.

The President called attention to this subject two or three years ago, and the American Railway Association deemed it advisable to appoint a committee of its members to inquire into the very things about which you are now seeking information. This committee is called the committee on safety appliances, of which I have been a member since its appointment.

I am not here in that capacity, and only mention the fact to explain that I have in this way been able to obtain information as to the progress actually made in the introduction of automatic couplers on freight cars, commencing with the year 1887.

Less than one hundred roads and some twenty private lines, representing about 70,000 miles, have reported that in 1887 (about the time the Master car Builders Coupler was introduced), they had 6,400 cars fitted; in 1888, 11,000 cars; in 1889, 22,000 cars; in 1890, 48,000 cars; in 1891, 83,000 cars; in 1892, 132,000 cars; and in addition, that they have put on and contracted for 27,000 cars since January 1, 1892, all to be supplied with automatic couplers. These figures denote the relative progress, and must not be mistaken as representing the total number of couplers in use, which total would be largely in excess of the figures given.

This increase, from 6,400 to 132,000, should be very convincing that the railroads are in earnest.

The CHAIRMAN. I want to ask you here what roads have made the most progress in this work of adopting automatic car-couplers?

Mr. ELY. The trunk lines, principally. My time was so short that I only brought the totals with me, thinking it would be of interest to you to see how, from 1887 until 1892, even these few roads have increased from 6,400 to about 132,000 and have ordered 27,000 more.

The CHAIRMAN. What is your impression as to the other roads that have not reported; do you think they have done anything, or have they done much?

Mr. ELY. Yes, sir; I think many of them have.

At the other hearing, two years ago, a question was asked to the effect, Would it not be of advantage to the roads then applying couplers to have a whip used to drive into the fold those that had shown no inclination to act? The answer at that time was that we felt the moral effect of the larger roads would be sufficient.

It must be remembered that the automatic coupler was not a very well-defined thing four or five years ago, and many of the ideas about it

were crude. Many defects of a dangerous nature have developed from time to time; the question of safety demands that each step should be carefully considered, especially as the effects of wear can be learned only by actual service. So that on the whole it seems to me, judging from experience in the introduction of other appliances, that the progress has been phenomenal.

About a dozen manufacturers of the Master Car-Builders' type of couplers report their present capacity and general output as about 30,000 couplers per month.

The CHAIRMAN. Their capacity could be gauged according to their necessity without much trouble?

Mr. ELY. Yes, sir; of course they would increase their capacity to meet the demands.

Senator JONES. You say they are selling 30,000 monthly?

Mr. ELY. Yes, sir; and they say at 10 days' notice they can increase their capacity to 40,000.

This shows a remarkable and phenomenal progress, both in the large amount of money that has been invested by the manufacturers, and in the fact that while four or five years ago there was but one coupler that was promising, there are now at least five or six.

The CHAIRMAN. You are opposed to any legislation on the subject?

Mr. ELY. Yes, sir; but I do not like to say that too broadly. I am opposed to it because I think it will do harm and hinder development. If it would do any good I would be heartily in favor of it.

The CHAIRMAN. Your view is that it would not do any good?

Mr. ELY. It is; I do not believe we should make a law only because we do not know what else to do. The railroads have certainly shown great energy without law.

The CHAIRMAN. A great many people are being injured?

Mr. ELY. A great many; undoubtedly so; and we are all, the railroads as well as others, striving, in the cause of humanity, to do away with entirely, or at least reduce these casualties to the minimum; this is the only fair basis upon which to discuss the question. Will you permit me to ask that, in reviewing the statements which will be made, you will carefully consider the opportunity those who will testify before you have had for forming opinions of value. In other words that theory be not regarded as of equal weight with experience. We must not take a leap in the dark, and in my opinion every bill I have read [I have only to-day read the one referred to by Mr. Rodgers] would be the equivalent of so doing. Mr. Rodgers's bill, which happens to lie before me, says that couplers must be such that they will couple by impact, etc. Under it may not five hundred or more kinds of couplers be used?

The bill does not specify the Master Car Builders or other type. The commission of Massachusetts at one time approved five couplers; these five would not couple with each other and great confusion resulted. There is to-day a difference of opinion as to whether the Master Car Builders' type is really the best type. There are some roads in this country that declare themselves against it.

Suppose this bill should become a law. The latter could, and probably would, equip their cars with couplers of the link-and-pin type, and the other roads would at the same time be putting on the Master Car Builders' type. If the law is to be valuable, and to be of the service which it is intended to be, it must be such a law as will require that uniform couplers be used.

The CHAIRMAN. Do you not think that Mr. Rodgers's bill, which he has commented upon here, would require a uniform coupler?

Mr. ELY. Not by any means—far from it. Fifty or more different types of couplers could be used under that bill.

Senator JONES. Has experience shown that the use of the automatic coupler has greatly reduced the percentage of casualties on the road?

Mr. ELY. Not as yet. It has been said on the contrary that it has increased them largely—this may be so to some extent, but I think not to such an extent as is imagined. Of course when two things are not alike a man must hesitate a moment to see how they will go together. But there are so many of the Master Car Builders' couplers in use to-day, and so many of the old form, that men have come to know how to couple them together.

As said before I am not here to oppose anything that will bring about a better state of affairs, but rather to point out the unwisdom of any bill I have seen or can imagine—

The CHAIRMAN. Could you get up a bill that would bring about a proper state of things by which the railroads would be required to use one particular device, and still would result in benefit finally to the service?

Mr. ELY. I could not. I do not hesitate to say this for the reason that I have given much thought to the subject of late.

The CHAIRMAN. Then there is no bill yet that you have seen or been able to put in form yourself, that you think would be an advantage to these people in protecting them from being killed or injured.

Mr. ELY. No, sir; I do not know of any, and I have not been able to devise one myself.

I do not know how familiar the committee is with what has been done by the Board of Trade of England, which has been in existence fifty odd years. Although originally their principal duty was the regulation of rates and other traffic matters, they found themselves confronted a few years ago with just the character of work that is now before this committee. The Board of Trade appointed their inspectors from the Royal Engineers. They did not have authority to enforce their recommendations, but could call for men and things, and were not restricted in their investigations. The inspectors report to the Board of Trade, and the Board of Trade to Parliament as to their recommendations.

After an existence of forty years this is what a prominent member, Mr. Farrer, said:

(1) The railway companies have no right to object to any interference requisite for securing the public safety. They have a monopoly of public traffic, and are bound to do whatever is necessary for that object.

(2) Nor is it necessary to argue that railway administration is perfect. It may be admitted that, though their business is in general well and ably conducted, they are sometimes poor, sometimes niggardly, sometimes slow, and sometimes obstinate. Railway companies have also some of the defects of public departments in the size and cumbrous character of their official machinery and in the remoteness of the bearing of the important motive of self-interest in the directors and managing officers.

(5) But after all these admissions, general interference with the administration of railways is objectionable on the following grounds:

(6) By such interference you are setting two people to do the work of one. Double management is notoriously inefficient. One bad general is better than two good ones.

(7) You set those who have less experience of management and less personal interest in the result to control those who have more.

(8) Control is either apt to become formal and a sham, or if zealously and honestly exercised, to be rigid, embarrassing, and a hindrance to improvement.

(9) Many excellent things, the adoption of which is desirable for public safety, *e. g.*, the block system interlocking points and signals, efficient brakes, properly constructed ties, are not things which can be once for all settled, defined, and prescribed, but

things of gradual growth, invention, and improvement. Had any of them been prescribed by law at any time past they would probably not have been what they are now, and were they now prescribed and defined by law future improvements would be checked.

This is a most insidious form of evil, for we do not know the good which we thus prevent. It is no answer to say that Government control would be intelligent, and would encourage improvement. It is not Government or its officers who invent and adopt inventions, and those who do so are far less likely to improve when Parliament or Government has defined and prescribed a definite course, the adoption of which frees them from responsibility.

(12) Lastly, it is impossible to maintain at the same time any general system of Government control, and any effectual responsibility on the part of the companies. At present the companies are responsible to public opinion and to Parliament before which they have constantly to appear, and they are under heavy liabilities for accident and danger in courts of law. Once admit Government control and these liabilities are at an end. No one can find fault with a company for that which the Government has sanctioned. With a system of control, even Government inquiry will be useless, for the Government officers would be inquiring into their own acts.

(15) It is scarcely necessary to add that the reasons against Government control which are above advocated are entirely consistent with a thorough system of Government inspection and investigation. The function of throwing light on all parts of the railway system, of investigating all alleged dangers, whether accidents have happened or not, and of ascertaining the true cause of accidents which do happen, is one which the Government can exercise with the utmost possible advantage and without fear of dangerous results. It is one which is useful to the companies, for it points out to them real sources of danger, and relieves the public mind where there is unfounded apprehension of danger. It brings to bear on the companies the powerful motives of fear of public opinion, of Parliamentary pressure, of apprehension of loss of traffic, and of legal liability for damages. And it does this without ulterior ill consequences.

The consequences that I am afraid would follow.

It is because these forms of remedy are in reality of very great efficacy, and because they are not inconsistent with government control, that I depreciate the latter.

This report was made at a time when Parliament had under consideration the advisability of giving this board of inspection authority to regulate safety appliances. Their opinion as seen was that they should not be given such authority.

Mr. Farrar has given this carefully-prepared opinion after years of experience, and I can not refrain from calling your attention to it, and asking for it your most careful consideration.

The CHAIRMAN. We want to find out what we ought to do in the premises.

Mr. ELY. Or rather ought not to do. It is possible that a carefully selected committee might be appointed, as indicated by Mr. Moseley a moment ago, to look into the subject and report as to what, if anything, it thinks should be done, not as to couplers alone, but also as to the broad question whether action by Congress is advisable or necessary.

The CHAIRMAN. If there is going to be any inside action by organizations it should be taken very soon. We can not have this subject hanging along here all through the session. We must come to a conclusion about it one way or the other.

Mr. ELY. I do not mean a committee to report to you now; I mean at some future time. I think you are pretty well convinced that there is a great deal of progress being made.

The CHAIRMAN. The only question is whether there is progress enough. As far as I am personally concerned I would much rather the common carriers would go on and do this without any legislation; but if they are not going to do it and in the meantime hundreds and thousands of people are maimed and killed every year, if there is anything that Congress can constitutionally do it ought to do it in order to hasten the stopping such a situation.

Mr. ELY. There is no doubt of that at all, and of course deaths and injuries will decrease following the adoption of a uniform coupler. I say again, be careful lest you make matters worse than they now are. There is one thing certain that a reduction in force will follow the introduction of a uniform self-coupler, and casualties will be proportionally less.

Senator HARRIS. What extent will the adoption of the automatic coupler probably reduce the force?

Mr. ELY. It is very difficult to answer except in a general way. It will be principally in railroad yards. It has been the favorite idea of our vice-president, Mr. Thomson, that it will some day be found advisable to classify railroads as to their physical conditions. This would be the first great step in the problem of safety on railroads. All this points to the appointment of some permanent commission to come between the Government and the railroads.

In conclusion, I wish to repeat, that in my judgment any bill drawn that I have seen will in the end do more harm than good at this stage of the situation.

STATEMENT OF MR. THOMAS L. GREENE.

Mr. GREENE. I have here the statistics of the railroad accidents in Great Britain. I will say that I have no interest in the matter other than that of a public writer and student of the question, and I have had in that a great interest for a number of years.

The point I wish to make is in reference to the statistics of railroads as printed in the last annual report, printed in the advance copy which I have here.

I was present at the meeting spoken of by Mr. Rogers in November last, and have been watching the subject with great interest, studying statistics when brought up. The point I wish to make is that the statistics here are not conclusive as to the kind of legislation which is needed. I am sure the committee will acquit me of any wish to say anything at all against safety appliances where human life or limbs are in jeopardy; if there is anything to be done or can be done to get rid of accidents of that description, I am sure I am with you.

But the statistician makes this remark:

No statement has yet been gathered of the proportion of casualties that might have been avoided if all cars were supplied with train brakes or automatic couplers.

The CHAIRMAN. That is the Commission's report.

Mr. GREENE. Yes, sir. I am quoting from page 76.

What I would bring before you is that this is literally true, because his own statistics, which are given in percentages on page 82, seem to be open to this objection, that the question of the automatic coupler is not carried out in such a way in this table as to form any basis as to what injury is caused by the link-and-pin coupler. My own impression upon that point from my experience in railroad affairs is that the actual form of the coupler has not killed and injured as many men as the popular impression indicates, and I have prepared here a little table which I can leave with you which is compared with what has been done in Great Britain.

The CHAIRMAN. To what other causes would you attribute the injuries in that table.

Mr. GREENE. I will give it, if the committee please, in a moment. In this official report of all the accidents which have occurred to rail-

way servants in Great Britain in 1890, which is the latest we have, 30 per cent of the killed among the employes are put down as owing to "walking, crossing, or standing on the track while on duty." I think every railroad man must admit that a very large proportion of the casualties on our own roads come from something like that—where trainmen are hurt, for example.

I should say also that the English statistics of accidents are not divided into causes exactly as are ours. Of all the employes killed in Great Britain in 1890, 30 per cent is put down as owing to "coupling, shunting, and caught between vehicles," while in our American statistics 15 per cent is ascribed to "coupling." The reason of the larger percentage due to these causes in Great Britain is not that more persons were killed in proportion to number employed, but that the other causes for accidents were very much less fatal in Great Britain. For example, 22 per cent of the fatalities to employes in the United States were owing to accidents to trains, while but 5 per cent is chargeable to that cause in Great Britain. That explains the difference in percentages of fatal accidents, because of coupling and switching, between the two countries.

While the American statistics do not include "walking, crossing, or standing on track while on duty" as among the causes, these are chargeable in Great Britain with nearly one third of all the employes killed. It is possible that the accidents in the United States from these latter causes, which, as everyone knows, are really responsible for many deaths and injuries here as well as in Great Britain, may be put under some one of the other heads in the statistician's tables—presumably under the head of "coupling," which in many parts of the country and on many roads is a term used to cover more or less of switching and other yard work in general. My respectful suggestion to the committee therefore is that if these statistics are to be made the basis of a car-coupling bill, it would be well to find out how many of these accidents were owing exclusively to the form of the coupler.

MR. MOSELEY. I want to say that the result of the statistician's report was the result of the railroads who have reported the number of men who have been killed and injured in coupling cars.

MR. GREENE. That does not cover my point, for I am not criticising the good faith of the commission or its statistician.

MR. MOSELEY. It is to conform to the railroads themselves.

MR. GREENE. That is true. I have talked with a great many railroad men on the subject. The point is that the statistics up to the present time do not show the number of casualties caused by the form of the coupler. For example, suppose the car is thrown with some violence against another car and a brakeman should happen to be injured thereby, the form of the coupler would have nothing to do with that injury. Of course I do not wish to say that people are not injured in coupling, only that the number is probably less than would be inferred by the tables given.

Now, the total number of employes killed in the United States last year from coupling cars is given as 369, while the number that was injured and killed in trains is more than that. The proportion is from 15 to 22.

If it were possible to avoid some of our train accidents—in other words, if we could direct public opinion, for example, to the question of blocking or interlocking signals and appliances of that kind—we would really do the employes more service and save more lives than by legislating about couplers. From what the people who report to the

Interstate Commerce Commission say to me, I doubt very much whether the form of the coupler, since the statistician makes that remark that no statistics have been gathered, is really responsible for the stated number of lives lost or persons injured from "coupling."

As far as we know, the dangers from all services to train men are about 50 per cent greater in the United States than in Great Britain. This arises partly from the fact that fewer men, proportionately to volume of traffic, are employed on our railroads, and partly because the hurry of business is greater here.

I understand that the type is not patentable, but that practically we can not have the type without using some form of invention which is included in the other. Is that true, Mr. Ely?

Mr. ELY. Well, generally. I do not think that has much to do with it.

The CHAIRMAN. Are you, gentlemen, who are buying these devices now to equip your trains paying anything for the patent?

Mr. ELY. They are bought just like a chair, or any other manufactured article. I suppose if there is any royalty it is included in the price paid for the article.

The CHAIRMAN. What do you pay for one of these couplers?

Mr. ELY. The open price is \$25 per car. I think it amounts to 4½ or 5 cents a pound for the material. The cost of application is very little.

Mr. GREENE. I merely make the remark that more people are killed from falling from cars than by the couplers. That can be prevented if the company uses air brakes. But that is mixed up with the other question, because it is more difficult to fit an air brake to the cars when automatic couplers are not used. The air brake will reduce the expenses of a railroad. More people are killed through the lack of the air brake by falling from the cars, according to the statistician's own figures, than are killed by the couplers. That is why the board of trade is trying in England to form public opinion in regard to this matter. There are other subjects than couplers more important to railroad employes from their own standpoint.

Mr. RODGERS. I would like to have just one word in response to what Mr. Ely has said, which was suggested by his remarks. There appears practically before you, gentlemen, four propositions; one to enact a bill specifying what the form of coupler shall be; second, to enact a bill, such as I have suggested here, providing that an automatic coupler shall be adopted, and trust that the Master Car Builder's type has received such impetus that it shall carry itself. The third is to enact a bill creating a commission to go all over this subject, which has been gone over for years; and the fourth is to do nothing at all.

Mr. Ely is in favor of the fourth plan—to do nothing. He then squints at the idea of having a commission to go over these things and invite the inventors to come before them with their seven thousand patents, and dig over the ground and thresh over the wheat that has been dug and threshed over for the last ten years.

So far as legislation is concerned, I think the time has arrived for legislation to compel these indifferent roads to adopt some automatic coupler.

Second. With regard to the idea of appointing a commission, I have no faith in it at all. I think it will make confusion worse confounded, and throw into chaos what now is nearly getting into line.

With regard to the second proposition, to enact into law a specific type of coupler, I would like to ask Mr. Ely whether, if there is any law passed, he would prefer enacting into law some type, and if so the master car-builders' type?

Mr. ELY. I certainly would.

Mr. RODGERS. You certainly would?

Mr. ELY. Yes, sir.

Mr. RODGERS. Now, my own impression is that that is not a very expedient thing to do; but if by the committee it shall be regarded as an expedient thing, I will say that I drew up some time ago a bill which would bring that about.

The difficulty with Mr. Ely is that no bill meets his approval. I am afraid he is waiting for the millennium to come before these brakes and couplers shall come. When the millennium comes I fancy all of us here will not care what kind of brake and coupler is used.

If it is considered by this committee, after having meditated upon the subject, desirable to legislate into existence the Master Car Builders' type, I will leave here a draft of a bill and call attention to the fact that at the proceedings of the Master Car Builders' Association held at Cape May, I think it was in June, 1891, they defined what the contour lines should be. That definition was subsequently modified by a circular from James W. Cloud, the secretary of a committee which was appointed by the Master Car Builders' Association at that time, and here is the circular setting forth what contour lines these couplers should conform to in order to meet with the requirements. So if it be regarded as expedient to enact that into law, I would suggest that the first section of the bill which I have presented be amended so as to read:

That no common carrier subject to the provisions of the act entitled "An act to regulate commerce," approved February 4, 1887, shall haul or permit to be hauled upon any railroad, after January 1, 1893, any car (other than passenger car) engaged in interstate commerce, as defined in section 1 of said act, unless said car shall be equipped with automatic couplers of the kind known as the "Master Car Builders' type;" that is to say, said couplers shall be of such size and dimensions and shall conform to such contour lines as are set forth on plates 6 and 7 of the printed official report of the proceedings of the twenty-fifth annual convention of the Master Car Builders' Association, held at Cape May, N. J., June 9, 10, and 11, 1891, as modified by a circular from the executive committee of said Master Car Builders' Association, dated Chicago, September 1, 1891, signed by John W. Cloud, secretary.

If there is any other way to define it and not stereotype it out of redemption, I do not know what it is.

I have also provided, if this alternative should be expedient, that the Interstate Commerce Commission shall have power to modify these contour lines if it shall be deemed expedient by them to do it.

In view of this suggestion of Mr. Ely, I will take the liberty of leaving with you a copy of the proceedings of the Master Car Builders' Association, and a copy of the circular that I have just alluded to, and the proposed bill.

Mr. ELY. It was not my suggestion. Mr. Rodgers asked, if any bill was to be passed, whether I approved of specifying the type of coupler, and I said, yes; if any should be passed it should specify A or B, or whatever it is, of the Master Car Builders' type. I did not suggest it.

Mr. RODGERS. Whatever that may be, I have this to say, that if the difficulties of enacting anything are so perfectly overwhelming; or, putting it in another way, if the objections to enacting a bill such as I have suggested are such as to leave it to the railroad companies, it really compels the adoption of the Master Car Builders' type by reason of the survival of the fittest.

Senator JONES. In view of what was suggested by Mr. Ely awhile ago as to the introduction of these couplers, and of the fact, as I believe he stated, that for the last five years the number in any one year has been

doubled in the next year; that now there are 140,000 cars which are equipped with these couplers, and the manufacturers of these couplers are selling 30,000 a month—I take it that the railroads do not buy these for fun—it would seem that they are being rapidly introduced, and if these figures should obtain, the entire railroad system of the United States will be equipped with these couplers by 1897, the time contemplated in your bill.

Mr. RODGERS. I will answer that question. One reason for the prompt equipment is that in many of the States of the Union there are laws already on the statute books requiring that the railroads within that State shall equip their cars with automatic couplers by a certain date.

Senator HARRIS. What States?

Mr. RODGERS. New York, Massachusetts, Connecticut, Iowa, and Nebraska, and there are other States. But the great State of New York, where pretty much every car in the United States finally brings up, and the fact that it can not get in there without having an automatic coupler under the statute existing at the present, has had a great deal to do with spurring these features on. I believe that the company represented by Mr. Ely, the Pennsylvania, and certain others will do what they can, and, while this legislation would not effect them much one way or the other, I may say that I know that there are many other railroad companies that will not do anything until they are compelled to do it, and the only way to bring about uniformity is Federal legislation.

Another feature of the bill suggested by Mr. Greene that the statistics given in the reports that he has read do not show whether the people were injured from automatic coupler or some other kind of coupler, I may say in the State of New York, in the returns which were made to what was my board, we had the provision inserted as to whether the injury was done by means of an automatic coupler or some other kind, and I know of no case resulting from two automatic couplers coming together. There are a great many dangers resulting from the use of the old link-and-pin coupler.

Mr. ELY. I want to say that in considering the progress made in the introduction of couplers it should be remembered that there are a great many cars in existence so constructed that it will be impracticable to use the automatic couplers without many changes in the cars themselves, which is necessarily a slow process.

Senator JONES. What did you state was the price, the cost of automatic couplers on freight cars?

Mr. ELY. About \$25 on the car.

Senator JONES. For the pair?

Mr. ELY. Yes, sir.

Senator JONES. That would be about \$12.50 on each end.

Mr. ELY. Yes; we call it per car. It costs very little for labor to put it on if cars are built for it.

Senator JONES. Is it a fact that the standard coupler does not cost any more upon all cars?

Mr. ELY. Yes, sir.

Senator JONES. So that the roads are now spending about \$375,000 a month for couplers?

Mr. ELY. That is correct, as given to me.

Senator HARRIS. About what is the life of a freight car?

Mr. ELY. Fourteen or fifteen years.

Senator HARRIS. What would be the period of this automatic coupler? Would they last longer or not?

Mr. ELY. They would last much longer. It is like the knife, first the blade and then the handle. The parts are renewed as worn, and the coupler must always be kept in order.

STATEMENT OF HON. WILLIAM J. SEWELL.

Mr. SEWELL. Mr. Chairman, when Mr. Ely made his statement I was absent, attending another committee. I wish to know if Mr. Ely has gone over the ground to the extent of giving all the figures?

In the first place, there are about 1,000,000 cars in the country. There are about from 150,000 to 200,000 of the new automatic couplers adopted and already on the cars.

Mr. ELY. I think it is nearer 200,000. I suppose there are 200,000 in use to-day.

Mr. SEWELL. That is 20 per cent of the whole number. That has been done without any legislation. The Pennsylvania railroad, I believe, has from 110,000 to 120,000 cars.

Mr. ELY. We have about 25 or 30 per cent.

Mr. SEWELL. They are building now about 5,000 cars, all of which will be equipped with the automatic couplers and air brakes. Every car that goes into their shop has put upon it the automatic coupler. So that 20 per cent up to this time, without any legislation, have been supplied with this automatic coupler. I was anxious to hear Mr. Ely state what additional progress has been made, as compared with three years ago. That is to say, if it were 20 per cent three years ago, it has gone up to 30 or 40 or 50 per cent.

The CHAIRMAN. He has given us those figures.

Mr. SEWELL. The Master Car Builders Association is composed of representatives from these railroads, and the adoption of these new automatic couplers, is due to the combined intelligence of these builders. The Master Car Builders, I understand, do not vote on any question of this kind until after consultation with the leading officers of the railroads.

Mr. Ely represents 3,000 engines in this country, which is the largest car manufacturing establishment in the country, all of which are now being equipped in this way. The difficulty with legislation is that you will retard the progress of these changes. In the meantime, if you arbitrarily say that a commission composed of John Smith and John Jones shall recommend to Congress, it will take two or three years to get their recommendation. By 1896, if the progress goes on without let or hinderance on the part of legislation, you will have automatic couplers on all these cars.

Now there is the danger. While we do not propose to obstruct or interfere with anything of the kind, we merely wish to show what we are doing, and where we will arrive by this legislation.

At 3:30 o'clock p. m. the committee adjourned until Wednesday, February 17, 1892, at 10 o'clock a. m.

WASHINGTON, D. C., February 17, 1892.

The committee met at 10 a. m., pursuant to adjournment.

Present: Senators Cullom (Chairman), Wilson, Hiscock, Chandler, Higgins, Harris, and Jones.

STATEMENT OF JOHN H. KING.

Mr. KING. Mr. Chairman and gentlemen of the committee: I have very little to say. You have already been told that our committee, which is composed of five members, has been unable to come to a conclusion as to what is best to be done.

Senator HARRIS. What is your committee?

Mr. KING. The committee appointed by the national railway commissioners convention, which is composed of the Interstate Commerce Commissioners and the railroad commissioners of the different States of the United States. This committee was appointed at that convention. Mr. Crocker is chairman, and Mr. Rogers, Mr. Hill, of Virginia, Mr. Smith, of Iowa, and myself, are members.

Mr. CROCKER. Will you allow me to make a statement?

Mr. KING. Certainly.

STATEMENT OF GEORGE G. CROCKER.

Mr. CROCKER. Mr. Chairman, the committee to which Mr. King refers is a committee appointed at a national convention of railroad commissioners a year ago, composed of five members, appointed for the purpose of drafting and submitting to Congress a bill with reference to securing the speedy adoption of driving-wheel brakes on locomotives, of train brakes on freight cars, and of uniform automatic couplers on freight cars. When that committee was appointed all the members of it were members of State railroad commissions. At the present time only two members of the committee are in office as members of State railroad commissions. A majority of the committee, therefore, are not railroad commissioners, and the three members who happen to be here this morning are the three members who are not now railroad commissioners.

The CHAIRMAN. Are you not still a member of the Massachusetts commission?

Mr. CROCKER. No, sir; I resigned on the first of January.

Senator HARRIS. You are all ex-commissioners, however?

Mr. CROCKER. Yes, sir, ex-commissioners. There was a question in our minds as to whether under the circumstances we ought to serve on the committee, but there was no way of filling the vacancy on the committee if we were to resign until after the next annual convention of railroad commissioners to be held some time in April next, and, after consultation with the members of the Interstate Commerce Commission, we came to the conclusion that it was our duty voluntarily to do what we could in furthering the objects for which we were appointed.

Shortly after the appointment of the committee, a circular was addressed to the railroad companies of the country asking for information upon the various subjects which were referred to the committee. The responses to that circular were received and digested through the kind services of Mr. Mosely, the Secretary of Interstate Commerce Commission, who also served as clerk of our committee. In November of last

year, a meeting was held in the city of New York, of which public notice was given, and at which railroad companies and railroad employes were represented. The committee heard all the evidence that was brought before it, and then went into consideration as to the form of bill to be submitted. When we parted in New York, we were unable to agree upon the form of bill.

Now I will state that the committee, organized in the way it has been, a member from Iowa, a member from South Dakota, a member from Virginia, a member from New York, and a member from Massachusetts, is one which it is difficult to bring together in consultation. It seemed that it would be too much to ask the committee to meet again in Washington for consultation and subsequently again for the hearing before this committee, and so arrangements were made with Mr. Moseley to get ample notice of the time when this committee was to get a hearing, and to arrange for a meeting of our committee immediately prior thereto for consultation. That has been done, and we had three members of the committee together yesterday. I regret to say that we have been unable to come to an agreement in regard to the form of bill to be submitted.

Do not, however, conclude that our failure to do so indicates any insuperable difficulty in the way of preparing such a bill. We have never been able to be brought together owing to our diversified residences. We shall submit to you certain bills which have commended themselves to one or more members of the committee.

Mr. Smith, of Iowa, has prepared a bill, for which he has gotten the approval in writing of one or two other members of the committee, which bill will be submitted to you for your consideration, with the letters indorsing it. Mr. Rodgers, of the committee, appeared before your committee last week. He happened to be in Washington at the time and presented his bill. Mr. King has a suggestion of a form of bill, and I also have a bill which I desire to submit for the consideration of the committee.

The question of what should be done as to hastening the adoption of the safety appliances upon freight cars has been under discussion for a good number of years by the conventions of railroad commissioners held in Washington, and also in State legislatures. The convention of railroad commissioners several years ago took the matter in hand and passed resolutions in regard to it, and resolutions have been adopted by various States in relation to it.

The three things which seem to be the most important are the application of driving-wheel brakes to locomotives. That is a question which concerns the safety of railroad travel, and is important because it is the application of brakes to a very large percentage of the weight of a train, the driving wheels being the means which are used to propel the train, and therefore being a very powerful instrumentality in stopping the train.

The next matter in increasing importance is the matter of the application of train brakes to freight cars. Our freight-car service is not only inadequately "braked" at the present time, brakes being on only half the wheels, but there are yet brakes which have to be operated by employes who travel over the tops of the cars and who are exposed to great danger from falling from the cars and also from overhead obstructions. Not only that, but the brakes can not be applied with the rapidity and the certainty which is necessary for reasonable safety in railroad traffic when our tracks are occupied, as they are at the present time, with a great number of trains and with little intervening time.

The power train brake, such as is used on the passenger train, can be applied to the freight cars, and when it is applied to the freight cars you will not dispense with the necessity of brakemen going over the tops of the train at that time. You will not dispense with the necessity of having brakemen on the trains or the necessity of their going over the tops of the trains at times, but you will largely dispense with the necessity of doing it under emergencies in the excitement of rushing from one car to another in ordinary cases. Therefore, both for the safety of passenger traffic and for the safety of employes on railroads, the speedy adoption of train brakes on freight cars is a necessity.

Now there is another and still more important feature which the committee of which I am chairman desires to bring to your attention in behalf of the convention of railroad commissioners, and that is the matter of couplers upon freight cars. There have been attempts for a good many years to devise automatic couplers for freight cars, and it is said that there are some five thousand patents of automatic couplers. There is practically no limit to the variety of automatic couplers which can be devised. There is a great number of these automatic couplers which will work automatically and safely with other couplers of the same description and of their same character. But when a coupler of one kind which is automatic is brought in contact with an automatic coupler of a different kind the automatic clutch entirely fails, and instead of having added safety there is added danger, because the two things do not go together properly. For instance, one form of coupler which is largely adopted on the roads in the United States (I mean the automatic coupler which is largely adopted on roads in the United States) is a vertical plane coupler, which is a coupler similar in form to the position of my hand [exhibiting to the committee] and works on knuckles like that [exhibiting to the committee]. When two couplers of that sort come together they clasp in that way [exhibiting to the committee]; but you take a coupler of that sort and bring against it a link and pin coupler and you will see the two couplers are calculated not to couple automatically. They will not do it. They are calculated more to smash each other. They are calculated to increase the danger rather than to diminish it.

With reference, therefore, to the question of couplers, there is a peculiar element involved in the problem, and that is that it is not sufficient for each road to adopt a form which is in itself good. It is necessary that each road and that all roads should adopt a uniform kind of coupler, or, in other words, couplers which will be interchangeable, which will work automatically with each other.

Now, throughout the United States there is a great diversity in couplers. They are of all sorts and kinds, and the brakeman never knows when he goes to a car what kind of a problem he has before him; and what we desire to bring to your attention is the importance of this problem and the reasons which we believe to exist why, with reference to these three matters, there should be Congressional legislation; why with reference to these three matters it is reasonable to break away from the general rule of noninterference with railroad companies in such matters.

In breaking away from these general principles we should break away from them just as little as possible. We should go only just so far as is absolutely necessary to accomplish the results which necessity compels.

Now let me give you some idea why this is an exceptional matter.

In the United States for the year ending June 30, 1890, 369 employes were killed and 7,842 were injured in coupling or uncoupling cars.

That is a total of 8,211 men killed and injured during one year in coupling or uncoupling cars, and in ten years that means a total of 80,000. That total means more than that, because last year the total was a thousand more than it was the year before.

The CHAIRMAN. How do you account for that, if you will allow me to ask you the fact? Is it because there are more miles of railroad, or more difficulties because of this mixture of couplers?

Mr. CROCKER. More miles of railroad, more business being transacted, greater press in yard, and, in part, perhaps due to the mixture of couplers. On that point, however, we get no definite statistics, and that is merely a surmise.

In fact, there are certain indications in my own State of Massachusetts which lead to the impression that it may be that the danger of coupling a link and pin to a master car-builders' type of coupler, for instance, is so apparent and so great that the employé is on his guard and takes unusual precautions. It sometimes so happens in railroad matters that the most dangerous things are not the things that lead to most accidents, because the danger is so terribly obvious.

Now I say there were 8,211 killed and injured during the year ending June 30, 1890. The total number of employés killed and injured in all the various occupations in which they are engaged for that same year was 22,000. So that the number of employés killed and injured in coupling and uncoupling cars was over one-third of all the accidents which happened to employés in any way, shape, or form in their various forms of employment. It is more than two and a half times as many as the injuries happening to employés in consequence of collision, derailment, and all other train accidents. This one thing of couplers causes more than two and a half times as many accidents to railroad employés as collisions, derailment, and all other train accidents included.

So much for the coupler question by itself.

Now let me say one thing further in regard to that. All those 8,000 accidents, that vast number of accidents, can be practically eliminated from the list if we can get uniformity and automatic action in couplers. The number of accidents of that sort will be diminished to very trifling proportions.

Now we go to one thing further, and that is the accidents that are directly or indirectly connected with the lack of train brakes on freight cars. For the same year the number of persons killed by falling from trains was 561; injured, 2,363. The total number of killed and injured was 2,924.

From overhead obstructions, killed, 89; injured, 345. Total number killed and injured from overhead obstructions, 434. So that the total accidents from those two causes are 650 killed and 2,708 injured, or a total of killed and injured of 3,358.

Now that class of accidents will be largely diminished. It will not be so largely diminished as the other, but it will be largely diminished if freight cars are equipped with train brake apparatus. That class of accidents, 3,358, added to the 8,211 which result from coupling and uncoupling cars make 11,569 accidents resulting from those two causes, which is more than one-half of all the accidents which happened to employés in the United States during the past year.

Those proportions in my own State of Massachusetts are even larger than that, for the reason that Massachusetts is a terminal State and the dangers in freight yards are greater than they are in States where there is a through business. I think, therefore, I have given to the committee reasons why we believe that this is a matter which justifies somewhat exceptional treatment on the part of Congress.

On the other hand, it must not be understood that in placing these figures before you I am disposed to criticise the management of railroads upon this matter. The advance which the railroads of our country have made in speed, in comfort, and in safety has been little short of miraculous. But there is an apparent necessity of bringing about uniformity through some legislation upon this subject.

Senator HARRIS. How would you determine as to what particular coupler is to be the uniform coupler of the railroad system?

Mr. CROCKER. I was just coming to that. If you will pardon me, I will state that I was just going to strike that point. Now, I am very much opposed to any form of legislation enforcing the adoption of any specific coupler by name. I am very much opposed to Congress attempting to select a coupler, or leaving it for any commission to select a coupler, and it seems to me that such methods should not be resorted to, unless as the last extreme and only method by which the object can be accomplished. And the effort which I have made in drawing a bill upon this question has been to draft a measure which would leave it to the railroad companies of the country to determine what the form of coupler should be, and then giving to that form of coupler the authority of the United States as the standard for interstate traffic throughout the United States, and compelling the railroad companies within a reasonable time to equip their cars with the standard coupler so prescribed.

The CHAIRMAN. How long a time? Have you specified that in your bill?

Mr. CROCKER: Yes, sir. The first section of the bill relates to the power driving wheel brake.

On and after the first day of January, eighteen hundred and ninety-three, no common carrier subject to the provisions of the act entitled "An act to regulate commerce," approved February fourth, eighteen hundred and eighty-seven, shall put in use on its line in interstate passenger or freight traffic any new locomotive unless such locomotive is equipped with power driving wheel brakes.

SEC. 2. On and after the first day of January, eighteen hundred and ninety-five, no such common carrier shall use in hauling interstate passenger or freight traffic any locomotive which is not equipped with power driving wheel brakes so arranged as to be operated in connection with the train-brake system: *Provided, however,* That the requirement that the power driving wheel brakes shall be so arranged as to be operated in connection with the train-brake system shall not apply to locomotives used only in yards for switching purposes.

That is, it requires them on new locomotives to put a power brake on every one of them after the 1st of January, 1893, and to have all the locomotives equipped by the 1st of January, 1895.

The next sections, 3, 4, and 5, relate to train brakes.

SEC. 3. On and after the first day of January, eighteen hundred and ninety-three, no such common carrier shall put into use or haul or permit to be hauled on its line for the transportation of interstate freight traffic any new car belonging or leased to it, or any old car belonging or leased to it, which subsequently to the passage of this act has been sent to its shops for general repairs unless such car is equipped with brakes for each wheel and with train-brake apparatus of such a nature that the brakes can be set and released from the locomotive.

SEC. 4. On and after the first day of January, eighteen hundred and ninety-seven, any such common carrier owning or having in its control cars equipped with brakes and with train-brake apparatus as set forth in the preceding section sufficient in number to duly transport the interstate freight traffic coming to it from connecting lines may lawfully refuse to haul or to permit to be hauled over its line cars received from such connecting lines unless such cars are duly equipped with brakes for each wheel and with train-brake apparatus arranged to be operated from the locomotive and of such a character that it can be operated in connection with the train-brake system in use on its own cars.

SEC. 5. On and after the first day of January, nineteen hundred, no such common carrier shall haul or permit to be hauled on its line for the transportation of inter-

state freight traffic any car which is not equipped with brakes for each wheel and with a train-brake apparatus of such a nature that the brakes can be set and released from the locomotive.

We give, therefore, seven years and a half before the final accomplishment of that result shall be required.

The CHAIRMAN. As to brakes?

Mr. CROCKER. As to brakes; and in regard to that I may say that the application of train brakes to a freight car costs about \$50 a car. It means an expenditure on the million cars used in interstate traffic of \$50,000,000.

The CHAIRMAN. What proportion of the cars have them now?

Mr. CROCKER. Something over 100,000 are now so equipped.

The CHAIRMAN. What proportion are equipped with automatic couplers?

Mr. CROCKER. With reference to the car couplers there are about 110,000, apparently, according to the latest statistics, equipped. That is, according to the statistics of June 30 last. There were about 110,000 equipped with the master car-builders' type. There were about 60,000 equipped with other forms of automatic couplers, so-called, making 170,000, and the balance, 788,000, I think, were presumably equipped with the link and pin.

The CHAIRMAN. It was stated before the committee, I think, at the meeting a week ago, that there were from 140,000 to 200,000 equipped with car couplers, and that the party manufacturing these couplers was turning out about 30,000 a month, and it looked a good deal to the committee if that was going on at that rate they would get the couplers all on before any bill would be passed to that effect.

Mr. CROCKER. We know nothing, except the latest absolute information which we have is the information which was received in response to the circular of our committee which was sent to all the railroads of the country on the 30th of June last year, and there is no question but that there is a considerable progress in the matter of putting on the master car-builders' type of coupler—very rapid progress. On the other hand, some roads are changing from the master car-builders' type to other types, and some roads are putting on other types of vertical couplers or types of automatic link-and-pin couplers on new cars. They are putting them on at the present time, and the object of any bill which may be submitted is to bring about a determination of the question as to what shall be the standard couplers of the United States, so that this diversity shall not go on, and so that these roads shall not be going on in different directions and following different methods, according to the section of the country in which they may be located.

The CHAIRMAN. Please call the attention of the committee to the provisions of your bill which will regulate that feature.

Mr. CROCKER. That is in section 6—

On or before the first day of July, anno Domini eighteen hundred and ninety-three—

Now, in regard to this provision, I wish to say to the committee that I have endeavored to be very conservative; that I have endeavored to interfere as little as possible with the operation of railroads, while at the same time accomplishing what I believe to be necessary results.

On or before the first day of July, anno Domini eighteen hundred and ninety-three—

That is, a year from next July—

every such common carrier shall file with the Interstate Commerce Commission in Washington a statement certified to under oath by the president and clerk of the corporation as the action of said corporation through its board of directors, setting

forth such details in form, size, and mechanism as it deems essential in every freight-car coupler in order to insure requisite conformity, requisite automatic action, and requisite safety in service, and also stating the number of freight cars owned by it and under its control, and also the number of other cars under its control by lease on the thirtieth of June, eighteen hundred and ninety-two, exclusive of those used solely for State traffic. Such statements shall be made upon blanks to be provided by the Interstate Commerce Commission, and the determination of such commission in relation to the validity of the several statements received shall be final. If upon examining the statements so received said Interstate Commerce Commission is of opinion that companies owning at least sixty per cent of the freight cars owned and controlled as aforesaid by companies which shall have duly filed statements as aforesaid have agreed upon such details of freight-car couplers in form, size, and mechanism as will insure requisite conformity, requisite automatic action, and requisite safety in service, said commission shall thereupon declare and publish that couplers complying with such details so agreed upon shall thereafter, until otherwise ordered, according to law, be the standard couplers for use in the freight-car interstate service.

SEC. 7. After the expiration of six months from the publication of such declaration by the Interstate Commerce Commission no common carrier subject to the provisions of the aforesaid act to regulate commerce shall put into use for the transportation of interstate freight traffic any new car belonging or leased to it or any old car belonging or leased to it which subsequently to said date has been sent to its shops for general repairs unless such car is equipped with standard couplers prescribed as aforesaid.

SEC. 8. On and after the first day of January, eighteen hundred and ninety-seven, any such common carrier owning or having in its control freight cars equipped with standard couplers prescribed as aforesaid sufficient in number to duly transport the interstate freight traffic coming to it from connecting lines may lawfully refuse to haul or to permit to be hauled over its line freight cars received from such connecting lines unless such cars are duly equipped with such standard couplers.

SEC. 9. On and after the first day of January nineteen hundred, no such common carrier shall haul or permit to be hauled on its line for the transportation of interstate freight traffic any car which is not equipped with standard couplers prescribed as aforesaid.

SEC. 10. An employé of any such common carrier who may be injured by any locomotive or car in use contrary to the provisions of this act shall not be deemed guilty of contributory negligence in consequence of continuing in the employ of such carrier after the unlawful use of such locomotive or car has been brought to his knowledge.

The CHAIRMAN. Suppose that that sixth section is not complied with by the agreement of 60 per cent of those representing cars, how do you bring them together after that?

Mr. CROCKER. The sixth section, as you will see, is drawn in this way, that if 60 per cent of those should make statements. It will not be safe for the railroad companies not to make general response to that circular. I think it is a simple and very effective way of bringing about the result.

Senator CHANDLER. If 60 per cent do not, then your sixth section does not take effect?

Mr. CROCKER. If it should be that 60 per cent would not agree, then the object to be accomplished would not be reached.

Senator CHANDLER. Sections 6, 7, 8, and 9 depend upon the agreement of 60 per cent of the companies.

Mr. CROCKER. Yes, sir. The fact is that the companies will agree, they will be compelled to agree under that, because they will not be willing to leave the possibility of the standard coupler to be determined against their interests. One side or the other is going to come down to two forms—

Senator CHANDLER. Suppose the railroads really do not want any legislation upon this subject (and we see no evidence that they do) it is perfectly possible for the railroads to paralyze these sections by adopting a different style of coupler. The Pennsylvania system would adopt one style, the New York Central would adopt another, and the Baltimore and Ohio another, etc. Then the law is nugatory.

Mr. CROCKER. Yes; if they should do that.

Senator CHANDLER. We simply legislate ourselves into their hands, and all this class of people you want to protect we deliver over to the railways and say, "Now, you do not want any legislation, but here is some, and whether it is especially effective or not you may decide. If you will agree, then the law is in force and it is penal. But if you will manage to differ your law is gone." Is not that the effect of it?

Mr. CROCKER. Yes, sir; that is exactly it. But will they take that position? In the first place, it is going to be a very great advantage to them to have a standard form of coupler prescribed in this way. It will be an advantage to them in matters of expense, because their couplers will not be broken up by couplers which come in contact with them which are not fitted to couple with them. It will be an advantage to them in the matter of damages, because they will when they do get this uniformity which they all desire—I know they all desire it—when they do get this uniformity the amount of injuries will be very greatly increased, and if they do not have this uniformity they will have to pay for the injuries which ensue.

Then still further, and most important is this, that the railroad companies of the country do not want Congress to interfere and prescribe the forms of couplers which they shall use, or any form of safety appliance. They do not want to drive Congress or the people to any measures which look toward nationalism. They do not want to be before the people in the position of being unable to agree among themselves, and being therefore in a position where the Nationalists shall say, "You have proved that you can not run interstate railroads satisfactorily yourselves because you can not agree. You have had ample opportunity to come to an agreement. You have thrown that opportunity aside and now is the time when you have forced Congress to make good for your own deficiencies and your own inability to come to some understanding."

Now, gentlemen, it is possible to draw a bill much more stringent than this. Bills have been drawn which are much more stringent than this, but the question is, can those bills pass Congress? It is better to have this than it is to have nothing, and it seems to me that every element of self-interest will lead the railroad companies of the country to adopt this opportunity of determining for themselves what their standard shall be, and having it approved by the authority of the United States.

Now one question will occur to your minds probably which ought to be provided for in the bill, and that is this: That if they should agree upon a standard form of coupler, the persons who might be the owners of inventions involving those details agreed upon might be in a position to charge an exorbitant price for their inventions, and I think a clause should be inserted in the bill to this effect before the clause "said commission shall thereupon declare," "and if said commission is satisfied by bond or otherwise that the royalties to be charged for any invention involved in the details as agreed upon as above shall not exceed a sum per coupler which shall be reasonable."

Then it may prescribe them as the standard coupler that will force everybody into an agreement as to the amount to be paid for the coupler. And one thing further in the bill ought to be amended, and that is before the words "in form, size, and mechanism," "setting forth such details with reference to height, form, size, and mechanism as it deems essential." The matter of the height is a thing which is very important and which should be definitely stated.

I will submit to the committee later a draft of the bill with these corrections made so that they may have it in correct form.

I desire simply to say in regard to this that this is a mere suggestion coming from me and not in any way as representing the committee of which I am a member. Other members of the committee have and will submit to you drafts of bills which conform to their idea.

At the last session of the Massachusetts legislature, impressed with the great number of accidents which happened in that State and throughout the country from these causes, some resolutions were passed and a committee of three, consisting of one on the part of the senate and two on the part of the house, was appointed to appear before Congress and present the resolutions and to urge the passage of a bill, and that committee are here present.

The CHAIRMAN. Gentlemen, I think it will be necessary for the committee now to take a recess and the hearing will be resumed, I should say at half past 1 o'clock.

Mr. HAINS. Mr. Chairman, may I say a word?

The CHAIRMAN. Yes, sir.

Mr. HAINS. I appear here for the railroads in this case. I am vice-president of what is known as the Plant system of railroads in Georgia, South Carolina, Florida, and Alabama. I am also here as the president of the American Railroad Association. I do not wish to take up your time just now, but as you have not probably had a chance to hear what I do not want to call the railroad side of the question, or the railroad statement of the question, I hope we may have an early opportunity to be heard after the recess, as I and my colleagues have come here at considerable inconvenience to our business.

The CHAIRMAN. The committee will hear the gentleman after it resumes its session this afternoon.

Mr. MELLER. Mr. Chairman, I will say that there are two or three delegations from Massachusetts. Mr. Crocker represents the Railroad Commission. Then there is a gentleman who represents the legislature of 1891 and the resolutions that were sent to Congress on the subject-matter that you are considering. There is another committee representing the legislature of 1892. You have heard the Railroad Commission in the person of Mr. Crocker. The two committees from Massachusetts will be pleased to be heard this afternoon.

The CHAIRMAN. We would be glad to have you gentlemen consolidate what you have to say, and have one or two men of each committee, if possible, address the committee.

Mr. MELLER. I desire to suggest right here that this is the outcome of an agitation that was started by some members of this committee who are here to-day, and that side of the question which represents these thousands of men who are maimed and killed would like to have a fair show to present their case.

The CHAIRMAN. They certainly shall have a fair show, so far as this committee is concerned.

Mr. HAINS. If you will permit the railroad statement of the question to be made immediately after recess, in which I will endeavor to be as brief as possible, perhaps you will find that much unnecessary argument will thereby be done away with, because we shall probably suggest a great many things that will assist you in coming to a conclusion.

At 12 o'clock m. the committee took a recess until 1 p. m. At the expiration of the recess the committee resumed its session.

STATEMENT OF H. S. HAINES.

Mr. HAINES. Mr. Chairman and gentlemen of the committee: I appear before you to-day on behalf of what is known as the American Railway Association, an organization of the railway corporations of this country, with a mileage of 122,000 miles out of perhaps one hundred and seventy-odd thousand miles that there are in this country. I am personally connected with what is known as the Plant railroad system, a system of railroads in South Carolina, Georgia, Florida, and Alabama. I am the vice-president of that system, having been at times superintendent, chief engineer, and general manager.

The association for which I speak has a definite purpose. Its purpose is the development and the solution of problems connected with railroad management, and it would therefore seem eminently proper that in a question of the character you have now under consideration, this particular association of railroad corporations should be heard with reference to what is confessedly a most important problem connected with railroad management.

This association will perhaps be more familiar to you under its former title of general time convention, under which title it succeeded in establishing in this country what is known as standard time. It has also established a uniform set of hand and lamp signals for the use of train men, and also a uniform code of train rules, and we shall hope before we get through with this question that probably we shall have contributed something to the solution of this problem also.

I am here with some of my colleagues at the request of our executive committee, which is composed of Mr. Royce, general superintendent of the Chicago, Rock Island and Pacific Railway; the general manager of the New York, New Haven and Hartford; the vice-president of the New York, Lake Erie and Western; the general superintendent of the West Shore, and the general manager of the Chesapeake and Ohio. I only mention this to show what a representative body we are.

The CHAIRMAN. Are the switchmen represented?

Mr. HAINES. No, sir; we represent the railroad companies.

The CHAIRMAN. We are anxious to hear somebody who represents the men who are engaged in this work.

Mr. HAINES. Our executive committee is composed of representatives of the following roads: Chicago, Rock Island and Pacific; New York, New Haven and Hartford; Louisville and Nashville; St. Louis, Arkansas and Texas; New York, Lake Erie and Western; Lehigh Valley; West Shore; Chesapeake and Ohio, and myself, representing the Plant system. I mention this to show that it is a representative body, a body which represents pretty well the railroad interests of this country.

I will say to you, what you will probably be pleased to hear, that we have not come here to antagonize anybody. In fact, we know from what we have been able to gather, that we are on a line, and the same line, with what has been attempted to be accomplished by the committee on safety appliances of the convention of railroad commissioners and what is the desire of the several associations of railroad employes through their representatives.

I have said that perhaps it may be pleasant for you to hear that we are all in one line as to what we desire to accomplish. If there be any difference between us, it is a question as to which of the measures which we will submit for that purpose will best succeed in accomplishing the purpose which we all have in view.

I propose now, simply to state a few matters of fact. I will state that I am and have been vice-president of this association, and some years ago we established a committee on safety appliances. The purpose of that committee, which is a standing committee, is to consider all matters of safety appliances, the successful operation of which depends upon the united action of the railroad companies. We do not undertake to consider isolated matters, but only those for which united action is necessary. Among the first we took into consideration was that of safety appliances. We have, as I say, a standing committee on that subject, composed, at the present time, of the president of the Fredericksburg and Potomac Railroad, Maj. Myers, who is with us here; the general superintendent of the Fitchburg; a representative of the Delaware and Hudson; Mr. Ely, general superintendent of motive power of the Pennsylvania Railroad; Mr. Merrill, the general manager of the Chicago, Burlington and Quincy; Mr. Odell, who is here, general manager of the Baltimore and Ohio; Mr. Fillmore, general superintendent of the Southern Pacific Company; Mr. Whitman, general manager of the Chicago and Northwestern, and Mr. Hammond, superintendent Boston, Revere Beach and Lynn Railroad. This is the standing committee which has this matter in hand.

We took up this question of couplers, which had already received the attention of what I may call the technical part of our railroad service; that is to say, an association of the master car-builders of the railroad companies, not a voluntary association, but just as we are, an association representing the railroad companies. That association took up the matter of car couplers some years ago, and after a good deal of consideration, in which there was brought under their notice every variety of coupler that was known in this country, either practically or, I may say, theoretically, they came to the conclusion that the course which had been pursued successfully with reference to coupling passenger cars was the course which should be pursued with reference to the coupling of freight cars, and that the same principle which had been adopted in the one should be adopted in the other. But the couplers in use on passenger cars, which have become generally in use, much more generally since they took this action, what we call the vertical hook type of coupler, was a very expensive device, too expensive to be used on the large number of freight cars that there are in use in this country, and they devoted themselves to cheapening that device so that it would come within the reach of our requirements for freight-car service.

They did not undertake to establish a coupler; they undertook to establish a principle to which all couplers should conform. That was that they should be mutually interchangeable, never mind whatever might be their details, that they should couple with each other. That left it to the well-known ingenuity of the American inventor to exercise his powers in any direction he pleased, provided he conformed to that one principle. The success which attended their efforts in that direction seemed to be such that when it was brought before what I may call the body of managers of railroads of this country it was referred to its committee on safety appliances, and that committee, after careful consideration, a year ago last October, made a report to the semiannual meeting of the American Railway Association, in which they recommended that the companies, members of this association, should thereafter conform to the vertical hook type of coupler, what was known as the master car-builders' contour lines, in all new constructions.

That was discussed in open meeting of the association, and it was

adopted with but two dissenting votes. I will state that one of the railroad companies that voted against it has since adopted that idea and that principle.

Now, that is where we had brought it up to October, 1891; that is, that these couplers, of whatever patent they might be, should conform to a certain principle which I will not undertake to elaborate here. It is sufficient for me to say about that that any coupler that conforms to that principle must interchangeably couple with every other coupler that conforms to that principle.

You have had before you some statistics on this subject. They date back so far that we consider them not reliable to use before you. We have, therefore, through our own organization, obtained more recent information, which brings it up to about the first of the current month. The information which you have before you, which has been noted, is up to the 30th of June, 1890. That information is to the following effect: For the year ending June 30, 1889, there were 80,000 what are called automatic couplers. On the 30th of June, 1890, there were 115,000 automatic couplers. In this are included certain couplers that would not have come under our prescribed rule, because they were not mutually interchangeable, but they called them automatic, because they would couple among themselves. The first statement included passenger-car couplers as well as freight-car couplers, and they show that there were at that date 88,000 cars equipped with freight-car couplers which they called interchangeable.

I will show you now what is our record of what we call the master car-builders' couplers, which are mutually interchangeable. I will state that we have 171 corporations members of this association. We had only obtained at the time we made up this statement, which we had to make up rather hurriedly, reports from 91 members. These 91 members have about 700,000 cars at the present date.

These 91 members, with a mileage of about 75,000 miles of railroad, had in use on January 1, 1887, couplers of the kind I am speaking of, mutually interchangeable, on 6,300 cars. In January, 1888, they had 11,000; in January, 1889, they had 22,000; in January, 1890, they had 47,000 cars equipped with the master car-builders' coupler. In October, 1890, our association adopted this principle.

On January 1st, 1891, we find that the cars equipped have risen from 47,000 to 84,000. On January 1, 1892, they had risen to 134,000, and the latest statistics we have, coming up to about the 1st of February, show that there are about 136,000 cars belonging to these 91 railroad companies, with a mileage of 75,000 miles and freight cars of about 700,000 in number; that is, about 20 per cent of their total freight cars were equipped at that date with what we call the master car-builders' type of coupler.

Senator HARRIS. Does that include passenger cars?

Mr. HAINES. No, sir. I understand that we are speaking now of freight cars.

Now, that is not all. We have gone a little further and we have undertaken to ascertain from our members what they are doing about their new equipment. It has so happened that the company which I represent, which has a mileage of between 1,300 and 1,400 miles of road, has never used a vertical hook type of coupler in its freight service, but since the 1st day of January we have made a contract for 1,000 cars to be fitted in that way.

What are the others doing? We find that these 91 companies have now under construction 26,000 cars with this style of coupler, and I am

told by the car-builders of this country, a number of whom I have seen recently in connection with this subject, that it is the rule since the action taken by the American Railway Association that the cars ordered shall be equipped with the master car-builders' type of coupler.

Now these are facts, gentlemen, and they are fresh and they are authoritative. They come from the best sources that we can have, from the managements of the railroad companies themselves, reporting to their own organization.

Now I have said what is the situation to-day with reference to the adoption of a uniform type of coupler, and I think I have brought it to a point at which we can now begin to discuss another aspect of this case, and that is as to the legislation with reference to this matter. I understand the tendency of this legislation to be of a most laudable character and one in which we are entirely in accord, and that is that this committee desires to consider the proposed bills before them with reference to the safety of the men who use these couplers. That is the aspect of the case to which I propose to refer—the possibilities of legislation. It is not a question as to whether we should have a uniform coupler or not. The question is whether we shall have that kind of a coupler which will protect men's lives and protect them from personal injury, and that is the yardstick that is to be applied to all proposed legislation.

I have read the various bills that have been before us. I have seen those which have been presented and considered by the Senate committee, and I have tested them by that yardstick, as I have called it, and that idea is not dominant in any of these attempts to prescribe the kind of a coupler. They attempt to pick out automatic couplers and interchangeable couplers and uniform couplers. In the first place, there is no such thing as an automatic coupler. We do not want one. If you mean by "automatic" a thing which will act without the intervention of human agency, we certainly do not want that kind of coupler. It is all right for the cars to couple when you want them, but you do not want them to couple when you do not want them to do so. Of course, it is all right if they should uncouple when you want them to. What we all want and what the representatives of these employés want, what the committee on safety appliances of the State railroad commissioners' convention want and what this committee wants is a coupler which can be used without danger to the life or to the limb of the man who manipulates it.

THE CHAIRMAN. What is that?

MR. HAINES. That is exactly the test that I think all of us want to apply, and we have got a little confused on "automatic," "interchangeable," "uniform" couplers. I claim, gentlemen, that so long as we provide a coupler which can be manipulated without injury to the person manipulating it that is all you ask, and that is the only kind of legislation which from the moral standpoint you can fairly ask, because if you are going to go farther, if you are going to undertake to prescribe mechanical devices, if you, as I say, attempt to prescribe uniformity, it is death to progress. If you are going to petrify the art of railroad invention at the spot it is now, what will be the result? What would have been the result if a few years ago you had stopped the progress of invention on air brakes when we had the first Westinghouse brake? When the Westinghouse brake was first applied the president of our company came to me and said, "That is what we have been wanting. Let us put it on." I said, "No. It is in its experimental stage. Let us wait. If you will wait a little while you will see something come

out of that which will be very much better, and you will be sorry that you have ever adopted this."

What was the result? Westinghouse's first brake was limited in its application. He had not experimented with it long before he found that he could so improve it that it was bound to act under any and all circumstances even if the train parted, and those who had taken his first brake had to throw them away and reëquip their passenger trains.

That is what you will do if you take and petrify the condition of the art of railroad couplers at the point that it is now. You will prevent that well-known mechanical ingenuity of this country from improving on what we have now. I ask you in their behalf as well as in our own that you shall not do that, which would simply apply that system to the couplers you have.

Gentlemen, there are, as you have heard 5,000 different patents for couplers, and when you think of that you say to yourselves, "How, out of this vast number of couplers, shall we attempt to pick one?" If you made the effort you would have not only those 5,000 inventors dead against the thing, but you would have the 10,000 more who think they can invent something better.

We have not done that. We have prescribed the principle for uniform couplers; that they shall be mutually interchangeable and uniform only as to a certain principle. That excludes all other couplers, I am told, but about four or five hundred patents. What difference does that make? I will show you two couplers which are as different as they can be so far as their patent's relations are concerned, and yet they will couple together without the slightest trouble. [Exhibiting couplers to committee.]

I am going to show you where the difference is. They will couple [exhibiting and explaining coupler to committee]. You see they are of entirely different patterns, and yet they will couple here because they conform to that principle that I have told you about; that is, they have certain ideas which are essential to their being mutually interchangeable. Every one of the five hundred will do the same thing. Where do they differ? They differ with reference to the locking device. That is all. I will show you another one and show you what it is that it is necessary for the man who is coupling to know, what he wants to be able to do, to stand outside of one car and manipulate that locking and unlocking device. This is but a small sample of the device. If this were the same size it would lock with ease. What the man who manipulates the coupler wants is that every coupler, never mind what it is, shall have what we call the release rod, that controls the locking device, so arranged that he can stand outside of that car and operate it.

The CHAIRMAN. And the unlocking device.

Mr. HAINES. That is all the same. So long as that is the case, so long as he knows that he can go to the same place, and that a place of safety, and find that rod always there at the same place and he performs the same manipulation, what does he care whether the unlocking devices and the locking devices are the same? What does he care? It does not concern him. If he can stand right outside of the car and put his hands right there [indicating] and find that rod and turn it and unlock that coupler, that is all he cares about.

Now, I hope that I have contributed something towards a solution of this problem, which seems such a terrible one. It is just this, that so far as you are concerned in the interest of humanity, so far as we are all concerned, so far as the gentlemen who represent these associations of railroad employes are concerned, what they ask of us in this connec-

tion is that they shall be able to conduct their ordinary work in safety to themselves. If they are able to do that they do not care what device we use; it is none of their affair; they do not care, if we will just give them a safe device, so that they will know, whether it is dark or raining, when they go and stand in that place, and that a place of safety, that they shall find a rod that they can put their hands on and uncouple that car.

The CHAIRMAN. Do I understand you to say that you are in favor of legislation on the subject?

Mr. HAINES. I am coming to that, whether it is necessary or not. Following that rule all the time, what can you gentlemen do to assist all of us in promoting this thing that we all have at heart, the speedy adoption of couplers that will be safe to manipulate?

Now I have told you what the railroad companies have done. The drawing which I have here is not large enough for you to see it at this distance. If you gentlemen will just notice that, you will see with what an accelerated ratio this work is going on. [Exhibiting map to committee.] I tell you that to-day over 20 per cent of the cars of this country are equipped with a coupler that is mutually interchangeable, that has a release rod, where a man can stand on the outside of the car and handle it without danger to himself.

Now your minds will naturally revert to the statistics that have been placed before you with reference to the injuries, some of them mortal, that these men have received in coupling.

The CHAIRMAN. In making the change from the present condition to the kind of couplers you would adopt, what would be the result on the people engaged in the business?

Mr. HAINES. I am coming to that. You will notice all these devices. There is a slot made in the knuckle here [exhibiting]; that is made to couple the cars if they are fitted with a link and pin, and I assert that it requires more caution, greater dexterity, to couple a link-and-pin coupler to a coupler of this pattern than to another link-and-pin coupler.

We are in a transition period. We are passing from a coupler which is confessedly a dangerous one to a coupler which we assert to be entirely safe with the appliance of a release rod standing outside to control the locking device. In passing from one to the other during this period I am of the opinion, and I share this belief with those who are engaged practically and come in daily connection with this matter, that there is an increased danger until the time 50 per cent of the cars are equipped with what we will call the master car-builders' type of coupler. When you reach that point you will find more cars coming together with this coupler than with a link and pin and this coupler. From that time on the number of dangerous couplings will decrease until finally the old link-and-pin coupler will have disappeared from use altogether.

That has been accomplished in other things in this country. Those who have been familiar as I have been for twenty-odd years with the progress of railroads—I have been in the business ever since I was 16 years old—have seen many great changes brought about by the larger lines, the trunk lines, in our country using uniformly the same devices, and the other lines have fallen into line. They had it to do. They have done it, many of them reluctantly, but the pressure brought to bear on them by the principal lines was so great that they could not carry on their business without conforming to the more advanced requirements on these other roads. That is just what is taking place with this coupler question. The great roads of the country are not only

having their new cars equipped, but they are making it a rule that every car that comes into the shop for general repairs shall be equipped at both ends with one of these several patents, all of the same type, and all interchangeable. That work is going on on the Pennsylvania, on the Central, on the Erie, on the principal Western systems; it is going on so generally that the time is going to come when the railroad companies themselves will insist that they will not accept a car that is not provided with one of this type of couplers. They have not gotten to that point yet. They have, as I have told you, only 20 per cent so far. There are about 1,100,000 cars in this country, and we think on the basis of those roads which have reported to us that there are perhaps 220,000 out of that 1,100,000 that are equipped with these devices. It is a still more important point for you to bear in mind that the new cars are almost without an exception being equipped in this way. You may find 500 cars here or 500 there that are not, but I tell you that there are 26,000 cars that are reported to us as being under construction to-day which are being equipped with these devices. I am only showing you how the railroads are solving this problem for themselves and how they will solve it at an accelerated ratio.

Suppose we admit that the people representing the railroad companies appreciate the responsibility of their positions, what is due to their employes as well as the railroad companies, and that they are going along with this work on the right line, what can we do to help along?

The idea seems to be that we can be helped in this matter—I am speaking of the American Railway Association, which is on record as wanting its members to do this thing, by a vote in which there were only two negatives—what can you do to help us in this matter? I will tell you what fixing a date at which something shall be done, and nobody knows what it is, would do.

The CHAIRMAN: Suppose we were to fix a date that this device or idea that you have elaborated here shall be adopted by the railroads of the country, and that thereafter no cars shall be used in interstate traffic unless they are so equipped?

Mr. HAINS: You have not done that so far.

The CHAIRMAN: That is what we are talking about.

Mr. HAINS: I want to show you now what has been the effect. There is a feeling abroad among railroad managements that Congress feels impelled to do something, and that something will be to pick out from among the 12,000 couplers some one, and say thus far shalt thou go and no farther. I do not say that is a correct impression, but that is the idea that has got out.

Now, what has been the effect on the part of those railroad companies who are rather reluctant to fall into line? I had a gentleman call on me the other day representing a very largely used coupler of this type who had been in the State of Ohio attending to his business in introducing his wares there. I asked him how he made out. He said he felt discouraged; that so far as the lines were concerned, the through lines that ran across the State of Ohio, they were of course putting on the couplers; but the local railroads in the State came to a dead halt, and they are afraid to do anything. They are afraid that whatever they do—if I present my device to them they say, how do I know after I get my cars fitted up in that way that Congress will not say we shall use some other coupler?

Now, when you bear in mind that there are \$25,000,000 involved in this question, you can see how important it is to a man who is responsible to the stockholders for the expenditure of their money, and the

t trouble has been that they do not know what you are going to do. They are afraid you will do something different from what they are doing now, and it is an excuse in a great many instances for doing nothing.

That paper which I presented will show that very thing. It shows that the 1st day of January that lines which were progressing upward pretty good rate seemed to have halted for a while. It seems to me that had that effect. I do not assert that. That conclusion might be drawn from it, but what I told you as to what occurred in the State of Ohio was information given to me from a reputable man.

Now you ask me, "What can you do to help us in this?" It seems to me that if I have stated my case clearly, that we are solving this question rapidly that before any date that you could fix, even though you adopted this very device here, if you said as the gentleman did this morning (I think Mr. Crocker allowed about seven and a half years), if we ought to wait seven and a half years before we solved this problem, I should feel more discouraged than I now do.

THE CHAIRMAN. Is it your judgment that all the railroad cars of the country will be furnished with automatic couplers, or couplers of some type to be used interchangeably?

MR. HAINS. It is always dangerous for a man speaking in a representative capacity to state an opinion. I have endeavored so far to confine myself to facts and what might be logically deduced from those facts.

Let me state now what we have done in the matter of couplers in passenger-train car service. We first had what we call the Miller coupler.

We now have what is known as the Janney coupler, which type proved to be much superior, so much so that it grew and kept growing, until to-day the principal lines of this country that are using the Miller coupler are preparing to throw it off of their trains and adopt the Janney coupler as will couple with the rest that we have. You may say to-day it is substantially the fact that the entire passenger equipment of this country is equipped with that device.

SENATOR WILSON. Why would the fixing of a type tend to obstruct progress toward the adoption of such couplers in the intermediate grades?

MR. HAINS. The first thing would be that it would be a very serious matter, I suppose, rather a difficult matter, for you to attempt to prescribe this type of coupler without its meeting with a good deal of opposition from those who do not want that type.

SENATOR WILSON. Suppose we did not prescribe any particular type, but left that question to your action, only holding you responsible for the adoption of something which would insure safety?

MR. HAINS. That would be entirely agreeable to those of us who are already on that line already. But what would be the effect of those who have advanced quite as far as we have?

SENATOR WILSON. Would it not in that case have the effect of hastening their action?

MR. HAINS. Suppose you suggest, as the gentleman proposed this morning, five or seven years. I am afraid such is human nature that those who are reluctant to be pulled up to the place where we are would set back and say, "We have five years yet in which to settle this matter. We are going to settle it this year." But I tell you, gentlemen, that as soon as the principal lines in this country get their own cars sufficiently equipped with this device, which they will—they are doing it now—it will have a ruling effect upon the other roads, and the difficulty of having

link-and-pin couplers mixed up with them will be so great that they will insist that they will not accept a car which will not couple with this without any intervention of a man having to go inside between the cars to perform that operation.

Senator WILSON. Unless there should be some rule of public policy adopted, how could some of those companies refuse to take a car not thus provided which was in the interstate-commerce service?

Mr. HAINS. Well, I do not like to quote a trite saying, but it occurs to me about Columbus and the egg. The fact is that it is done to-day. I do not know whether it is done lawfully, but yet it is a fact.

Senator WILSON. I am speaking of it from a legal standpoint.

Mr. HAINS. I am giving you a practical reply. I am not a lawyer. To-day the railroad companies say, "We will and we won't take this car, and we will and we won't take that car. We prescribe certain rules, and if the car does not come up to that requirement we will not take it."

The CHAIRMAN. Is that because of a question of safety in coupling the cars?

Mr. HAINS. Yes, sir; and if a car comes to them that they think is not safe they will not take it.

The CHAIRMAN. If it is not safe they are not required to.

Mr. HAINS. Suppose it should be said, You shall not determine this question of safety or not safety? I will tell you that the railroads on the Pacific Slope will not take a car from any of us to-day that does not have an air brake on it.

The CHAIRMAN. All that is settled now.

Mr. HAINS. I do not know of any railroad company that has made it a legal issue. I have not said much about the question of air brakes because the burning question is the coupler.

The CHAIRMAN. They both burn a little.

Mr. HAINS. Yes, sir; I am prepared to say the same thing about the air brake. We have not got as far along with air brakes as we have with the coupler question. There are mechanical difficulties to be overcome yet in the use of air brakes on long freight trains that have not been solved. I will state that I think this matter has passed the experimental stage, so far as the type or principle involved is concerned; so that when you take up the question of air brakes you have yet to solve a mechanical difficulty, and that is the use of air, which is the principle which we all seem to have agreed upon among ourselves—the use of air in the application of power brakes upon a long train of freight cars. That question is, as I say, in the experimental stage, and yet I am prepared to show what progress has been made on that subject also. I myself must confess that I expressed a little surprise when I saw how much had been done. This very paper which I have here shows on this line what has been done in that direction.

The CHAIRMAN. That all seems well to a man who looks at that paper, but you can not tell what is on the paper by reading your testimony. I wish you would state it so that it will appear in your testimony.

Mr. HAINS. Very well. The present condition of freight cars in service fitted with air brakes is such that there were about 103,000 cars so equipped on the 1st day of January, 1892. Of course that means freight cars. There are about 18,000, out of the 26,000 which are under contract to be fitted with air brakes, I mean, which are to be fitted with this type of coupler. Of that 26,000, 18,000 will be equipped with air brakes. Now, it seems to me that that work is progressing as rapidly as could be expected, until we shall have solved the problem of using successfully compressed air on long freight trains. There have been

recently some very careful and extended experiments made by the Chicago, Burlington and Quincy Railroad with reference to the use of different kinds of air brakes. There has come up the question of interchangeability. Then the question was whether they could use different patents of air brakes mixed up together satisfactorily. This is to be solved yet.

As to the third point which has been made, as to the use of power brakes on engines, I will state that nobody thinks of building an engine without putting power brakes on it. We would not have one without power brakes. We are putting them on all engines, even the switching engines which are provided for in this bill. That question is taking care of itself.

There is evidence in here that there are now some 17,000 engines with power brakes applied to the driving wheels.

The CHAIRMAN. Is there anything further you wish to say?

Mr. HAINS. There is one other thing I would like to call attention to, because it is corroborative of what I have stated here. It is the matter of curing the evils in railroad management of this character by legislation.

I quote from the Engineering Journal of December, 1891, page 535. Here is an article on the very question of car couplers, and they quote such parts referring to that legislation as summed up by Mr. Thomas Farrer, permanent secretary to the British Board of Trade, in giving his evidence before a royal commission appointed to inquire into the causes of accidents on railroads.

He says:

But after all these admissions, general interference with the administration of railways is objectionable on the following grounds:

By such interference you are setting two people to do the work of one. Double management is notoriously inefficient. One bad general is better than two good ones.

You set those who have less experience of management and less personal interest in the result to control those who have more.

Control is either apt to become formal and a sham; or if zealously and honestly exercised, to be rigid, embarrassing, and a hindrance to improvement.

Many excellent things, the adoption of which is desirable for public safety, *e. g.*, the block system, interlocking points and signals, efficient brakes, properly constructed ties, are not things which can be once for all settled, defined, and prescribed, but things of gradual growth, invention, and improvement. Had any of these been prescribed by law at any past time they would probably not have been what they are now, and were they now prescribed and defined by law future improvement would be checked. This is a most insidious form of evil, for we do not know the good which we thus prevent. It is no answer to say that Government control would be intelligent and would encourage improvement. It is not Government or its officers who invent and adopt inventions, and those who do so are far less likely to improve when Parliament or Government has defined and prescribed a definite course, the adoption of which frees them from responsibility.

The CHAIRMAN. Have you anything further to say?

Mr. HAINS. No, sir. I believe I have concluded, unless my colleagues would like me to make any other suggestion. Mr. Meyers is the chairman of our committee on this particular subject.

Mr. MELLEN. I would like to inquire if it is the rule of this committee to hear the opponents of a measure before the friends of it have an opportunity to present their side.

The CHAIRMAN. The gentleman who has been talking indicated this morning that his remarks would probably remove the necessity of statements on the other side.

Mr. MELLEN. If I understand the tenor of his remarks he is opposed to doing anything, hence he is opposed to our proposition.

Mr. HAYNS: I believe I am through unless you would like to ask me some other question.

The CHAIRMAN. I know of nothing further now.

STATEMENT OF WILBUR H. POWERS.

Mr. POWERS. Mr. Chairman, I fully appreciate the needs of the hour. You have but little time and I do not desire to take much of it, and I shall endeavor to keep that promise fully as well as those who have preceded me.

It seems to me that there is an evil; that it is admitted; that there is no question upon that point upon which anything need be said.

The question is the remedy. I am not here to go into any particular system or to discuss the question, as I understand it, of car couplers from the standpoint of the mechanic or anything of that kind. But I am here to represent the sentiment of Massachusetts upon the subject of legislation.

The remedy has been attempted in our own State. From time to time there came before the railroad committee representatives of the employés of railroads and the railroad commissioners, and those who are interested in this general subject, who ask us for legislation. Our reply to that is, or has been heretofore, usually that it is of little use for the State of Massachusetts to pass legislation relating to this subject, because, while we might legislate another State might not, and therefore very little good would be done.

Now it would seem to us that something ought to be done, and that that something ought to be done by Congress. Therefore last year a resolution was passed. It was recommended by the committee on railroads. I have the resolution here and will submit it without reading.

The resolution is as follows:

[Commonwealth of Massachusetts, in the year one thousand eight hundred and ninety-one.]

RESOLUTION relating to couplers and brakes on freight cars.

Whereas from the last published statistics of the railways in the United States, being for the year ending on the thirtieth day of June, in the year eighteen hundred and eighty-nine, it appears that three hundred employés were killed and six thousand seven hundred and fifty-seven injured in that year in coupling and uncoupling cars, being fifty-six per cent of all the accidents happening to train men, and practically all these accidents can be avoided by the adoption of uniform automatic couplers for freight cars; and

Whereas five hundred and fifty-eight employés were killed and two thousand three hundred and seven injured by overhead obstructions or by falling from trains and engines, being twenty-three per cent of all the accidents happening to train men, and a large proportion of these accidents would be avoided by the adoption of the train-brake on freight trains; and

Whereas the regulation of couplers and of train brakes upon freight cars is of pressing importance and is within the proper scope of the powers of the Congress of the United States, while action by the individual States on these subjects has produced and must continue to produce conflicting and unsatisfactory results; and

Whereas at the convention of railroad commissioners lately held in Washington at the rooms of the Interstate Commerce Commission, upon motion emanating from the board of railroad commissioners of this State, a resolution was unanimously adopted providing for the appointment of a committee of five to appear before Congress as soon as possible after the opening of its next regular session, and urge the passage of measures calculated to insure and hasten the adoption of uniform automatic couplers and train brakes upon freight cars, and of driving-wheel brakes on engines,

Resolved, That the senate and house of representatives of the Commonwealth of Massachusetts, in general court assembled, approving of the action of its board of

railroad commissioners, do most respectfully and earnestly urge upon Congress the consideration of the foregoing subjects to the end that the consummation which all desire may be reached with the utmost reasonable speed, and especially do we urge upon our Representatives in Congress to join energetically in promoting wise, speedy, and effective action, and that a committee of one on the part of the senate, and two on the part of the house be appointed to convey this resolution to Congress, and act in conjunction with the committee appointed at the convention of railroad commissioners to urge upon Congress a speedy consideration thereof.

HOUSE OF REPRESENTATIVES, *March 30, 1891.*

Adopted: Sent up for concurrence.

EDWARD A. McLAUGHLIN, *Clerk.*

Concurred.

SENATE, *April 6, 1891.*

A true copy.

HENRY D. COOLIDGE, *Clerk.*

Attest:

EDWARD A. McLAUGHLIN,
Clerk of the House of Representatives.

Those resolutions state for themselves the feeling of the legislature last year in relation to this important subject.

We ask for legislation. We do not ask that a particular coupler be adopted. For that we do not care, and have no preference; but we do ask that something be done to hasten the time when there shall be a uniform system.

The gentleman who preceded me says while there is an evil it is being remedied, and therefore little legislation at the present time is needed. We feel that something should be done to hasten the transition stage. It is well known to all that when any reform is commenced there are a good many who say, "You can not do anything to aid this reform; it will come of itself. Sentiment must back up your law to a certain extent."

That is true. In the Commonwealth of Massachusetts the sentiment is right. What we ask for is legislation. The gentleman who preceded me admits that the sentiment is all right. But there are always a few who hang back. There will be a few railroads that will say, "Oh, if this committee reports that no legislation is necessary upon this subject, then we shall still cling to the link and pin."

We do not want that. We think a date should be set when they should, at least, do away with the link and pin. We think a day should be set when the safety coupler which they have here described, or some other coupler which is safe, should be adopted, and upon that we think legislation would be a great aid, and we are to urge upon you that you take a step in this direction which shall not only tend to hasten the time, but shall tend to show that Congress is willing to aid in this reform.

The railroads, of course, when public sentiment pushes them, must necessarily take some step; but not all railroads. There will be short railroads that do not care particularly for public sentiment, and there will be some large railroads that will be not very particular about the sentiment of the public as relates to them. The railroads as a whole will concede that public sentiment is something upon which they must act; and if you say a day shall be set, and you set it, when this appliance shall be in general use, or cars are not to be drawn over these roads, or something of that kind, it seems to me that you will hasten the time of this transition stage, and that in this way you will do something that the railroads say ought to be done. You will be aiding a reform, and you will at the same time not be doing an injury to the railroads.

That is all I desire to say to you.

The CHAIRMAN. You take the ground that some legislation is necessary. Now, can you define, as nearly as you may be able, what sort of legislation should be adopted by Congress?

Mr. POWERS. The particular thing which it would seem to me ought to be done is to set the date when the coupler should be of a safe character. There are certain couplers that are now known to be unsafe. Why should they still be permitted to be used?

The CHAIRMAN. You have heard the discussion by Mr. Crocker on the bill offered by him and presented to the committee to-day. Have you any criticism to make of that bill?

Mr. POWERS. I should not care to criticise the bill, for the reason that I have not examined it with that care with which one ought to examine any bill in order to criticise it. Neither would I care in all respects to say that I knew it was just right for the same reason.

The CHAIRMAN. I did not know but what you had given it careful consideration.

Mr. POWERS. I only saw the bill when it was presented to the committee this morning, and certainly some principles of the bill are correct.

The CHAIRMAN. There is a provision in that bill that seems in a measure to leave the matter open as to any compulsion. Do you think that would be a safe provision to enact in the light of what he says?

Mr. POWERS. You now ask for my personal opinion?

The CHAIRMAN. Yes.

Mr. POWERS. It seems to me if you should pass a law of that kind 60 per cent of the railroads would fall in with it.

The CHAIRMAN. You believe they would?

Mr. POWERS. I think so.

The CHAIRMAN. Suppose they did not; then what would happen?

Mr. POWERS. You would be still in your present condition, and I should not object to having that section so framed, or the bill so framed, that it would compel them, whether they decided to fall in with it or not. I should not necessarily urge that that section of this bill be held as of any wonderful importance, but my own personal view is that they would fall into it.

The CHAIRMAN. You think it would come out all right because 60 per cent of them would be in favor of it?

Mr. POWERS. The railroads in Massachusetts are following that particular idea.

The CHAIRMAN. And the air brake?

Mr. POWERS. And the air brake. I have not heard so much said in relation to that, even in Massachusetts, and I think the railroads there are anxious, both in relation to couplers and brakes, to get the best, and that they will readily fall in and assist in any legislation which would tend to make the couplers safe or the brakes safe. I think that they would very readily be a part of the 60 per cent.

STATEMENT OF F. H. RAYMOND.

Mr. RAYMOND. Mr. Chairman and gentlemen of the committee: I do not wish to take the time of the committee any further, because Mr. Powers has so well represented his committee here in regard to this matter.

My attention was called very forcibly to what the gentleman representing the railroad stated—that many of the crossroads would not

adopt a coupler, because they were so uncertain of what Congress would do in this matter.

It seems to me, therefore, very important that Congress should do something. If it should do something those roads then would evidently fall into a definite proposition, and certainly the number of deaths and accidents that are happening in this country ought to be something that would induce Congress, if possible, to frame a bill to carry out its results.

Now, regarding these couplers, I know nothing. It seems to me there are several which will interlock and become practically interchangeable.

I would suggest—I do not know that it is feasible at all—that Congress should secure possession of such couplers and give them freely to the railroads who wish to adopt them. I think certainly if the expenditure of sufficient money to own couplers of this kind was necessary to prevent the loss of five or six or eight or ten thousand lives a year it would be worth the effort to secure it.

The CHAIRMAN. Do you think there is any necessity for Congress to purchase these patents in order to secure this protection by legislation.

Mr. RAYMOND. If many of the railroads are so poor that they can not buy this I think they ought to be helped out when you consider the fact that it is to prevent the loss of life. There is a member of my committee here, who represents the other side, who is desirous of being heard.

The CHAIRMAN. Which do you call the other side?

Mr. RAYMOND. From the operatives' side, representing their interests more particularly. I would like to have Mr. James H. Mellen address the committee.

STATEMENT OF JAMES H. MELLEN.

Mr. MELLEN. At 4 o'clock yesterday afternoon we took the train for Washington, and most of us only had an intimation the night before that we were going to be assigned to this duty. Hence, the first time we have had an opportunity to look for the authorities with an idea of presenting a case was in this room this afternoon.

I have here the reports of the railroad commissioners of Massachusetts, a very conservative body. The ex-chairman, Mr. Crocker, you heard this morning. But I am not without some knowledge of the subject.

I have been a member of the Massachusetts legislature for ten years. I began fifteen years ago. I have been most particularly identified, as is pretty well known in Massachusetts, with the legislation seeking the amelioration of the condition of the employé class, and I believe I have introduced or supported almost every measure that has gone on the statute books of Massachusetts in the direction of legislative reform in the interest of the masses during the past fifteen years.

Let me say here that the United States, I am plain to say, a community of States governed by the people, in the interest of the people, so said, is less considerate of the interests of the common people, the employé classes, than is the sometimes somewhat effete constitutional monarchy of Great Britain and Ireland—that is, if the matter is to be determined by the number of ameliorative acts upon the statute books of the respective Governments. That is not to our credit; but I am pleased to say that of all the States in the Union that approach England in legislation in the interest of the great masses the State that I

have the honor to claim as my native State leads the van, and that they are not cranky in the enactment of legislation. As an evidence of it we can point to the fact that the other States of the Union are one by one copying Massachusetts enactments in the line of the protection of the operative class.

Ten years ago I introduced a proposition looking to the protection of the railroad people. My colleague from my city, a fellow-Democrat—I may interject here that the most of my committee are Republicans, so that we are not divided on political lines on this question—has been the champion of legislation in the direction that that legislation would indicate within the past ten years.

The CHAIRMAN. This is the resolution that you referred to?

Mr. MELLEN. We should have submitted one to-day, Mr. Chairman, that was enacted yesterday, but we had not time to wait; we had to take the train immediately.

I am sure you will take our assurance that the Massachusetts legislature of 1892 has reiterated what it said in 1886, what it said in 1888, what it said in 1889, what it said in 1890, and what it said in 1891, and now we say, in 1892, and we tell the representatives of invested rights, in the name of humanity we ask how many more years will we have to reiterate those resolutions before the Congress of the United States takes some definite steps?

Leave it to these gentlemen? How evasive are the gentlemen's replies to you! They are artfully dodging the issue. They have very astutely presented the case of railroads who are not disposed to take immediate action.

Now, we are not radical. In Massachusetts we have been just so conservative that we have convinced the most conservative of our railroad people that we are right. The gentleman you heard this morning representing in his family a million dollars of stocks, and a gentleman who is not supposed and who is not known to be affiliated or in sympathy with the so-called labor reform people of Massachusetts, is thoroughly imbued with the need of this legislation. He is a splendid railroad lawyer, and has got as much interest perhaps as any one individual in this room who represents any of the railroads that are here represented.

Hence we say we are not cranky. We are not asking for anything impracticable. We do not even want to draft our own bill. We permit the conservative railroad interests who are disposed to do something to draft the bill. We do not want the thing to go into effect twelve months or twenty-four months or thirty-six months hence if it is not practicable. But if the thing can be done and if two thousand lives and twenty thousand maimed, brave fellows can be saved by reason of the enactment of some bill by this Congress this session within the next year, then we want it done.

We are here to represent humanity. We are not here to oppose vested interests or do aught to their detriment. We are not inimical to them. We say as is said by our conservative railroad men that the same is practicable, and we want these people who are dragging behind the procession of progress to come up abreast of us.

I was somewhat amused at the sneering remark, if the gentlemen will permit me to say, at the leveling process, at the retarding of civilization that any such enactment would effect. We do not want to retard progress. We do not want to interfere with American invention. We want to stimulate it,

The CHAIRMAN. You have studied the subject a good while. What kind of an act would you favor if you were a member of Congress?

Mr. MELLEN. I would vote for an act that would oblige the railroads, subject to the authority of the Interstate Commerce Commission, to adopt some interchangeable coupler within at least twenty-four months.

The CHAIRMAN. You have heard Mr. Crocker expound the provisions of his bill. Do you give your assent to these provisions?

Mr. MELLEN. I do not in the main, although I think I appreciate the force of a suggestion made by a Senator that it put power in the railroad corporations to block the purpose of the act. I would frame it a little differently. I would not put that power in their hands.

The CHAIRMAN. Do you think that probably 60 per cent of the cars represented favor something of the kind?

Mr. MELLEN. I do not know. In the East I think they would.

Senator WILSON. Do you think it would be practicable within twenty-four months for all of the companies to place upon all of the cars the coupler that you favor?

Mr. MELLEN. I think it would, and the air brake, too. Now they have the air brake on all first-class cars in the country, as I understand it, and they could force all the others who have not that brake to put it on.

The CHAIRMAN. Have you made such investigations as would satisfy you that that could be done?

Mr. MELLEN. All I have is the testimony of railroad men and the opinions enunciated in our State reports from experts who were instructed by our legislature to make inquiries.

The CHAIRMAN. Do you think that in two years from the passage of the act the provision of the law ought to be that no car should be hauled unless it had such couplers?

Mr. MELLEN. I would not higgie about that. Three or four years would suit me. I think if you once give notice to the railroad corporations that it must be done within a limited time they will do it at once—set their mechanics and their inventors at work and agree upon the most practicable coupler and air brake that could be devised, and would introduce it by concurrent or joint action on the part of the railroads.

Then there is another thing in connection with that that we of Massachusetts were asked to bring to your attention, and that was the matter of forcing the railroads to heat their cars in some other way than from the heat radiated from coal in the stove. The gentleman did not allude to that in his remarks. There are a goodly number of cars that still use the old-fashioned stoves in heating. We would have the national Government interfere and put a stop to that. The holocaust at New York a few months ago should be an object lesson that should stir up the members of the national Government and cause them to enact a law that would make it obligatory upon all railroads within a very short time to use some heating apparatus other than coal stoves.

Now, sir, the President of the United States, two years ago this December, recommended, as may be seen of course from your own documents and from a document which I have here, the doing practically of that which we are asking.

The CHAIRMAN. We are familiar with his recommendations. The difficulty with the committee has been to satisfy itself that it was not making a mistake in any legislation it might enact, which would do the employes more harm than good. We have been going along trying to find out as fully as possible what would be the safe thing to do.

Mr. MELLEN. We have been very active in the premises; we have secured practically a unanimity of sentiment among the people of the State, some of the most conservative have been brought around to our views. At the inception of this movement we had to meet with a good deal of opposition in the legislature in the interest of the railroads. They are now agreed. Those who have had schoolmates and neighbors killed under their eyes, who have seen their blood trickling along the road are a little bit anxious that the national Government shall manifest more interest in the future than it has in the past.

I think it was six years ago that we sent our first resolutions. Then we sent them again four years ago, in 1888, and in 1890, and last year, and again this year; and, yet, sir, so far as I know, if I am wrong stop me, the first step in the direction of positive action yet remains to be taken by our Government. Hence it is that some of us have a little bit of feeling in the matter. One State is practically unanimous, and we are told by some of the gentlemen who represent the employés that there are other States, five or six of them, in accord with this sentiment, and those States have in the main the great bulk of railroad employés of this class within their borders. I hope, Mr. Chairman, that this body will see their way clear to urge some positive action.

The CHAIRMAN. This committee has undertaken to find out, if possible, exactly what the switchmen and the laboring men employed on the railroads thought and desired on this question, and hence many of them are here to-day.

Mr. MELLEN. I want to say just this in that connection: I have been the State officer of one of the great laboring organizations of Massachusetts, as well as being in the legislature for ten years. I am somewhat familiar with this class of employés. They are probably the understrata of the railroad employés; that is, they are the poorest probably; the most thriftless; they are the least saving; their occupation is the most precarious, the most dangerous; and perhaps that may be one of the reasons why they are so reckless and so thriftless. The other classes of railroad employés are more thrifty and more careful, and as a consequence they are more potent in making their opinions felt in the body politic. Now, the occupation of the railroad brakemen, a goodly number of them are citizens, is such that they are constantly shifting about and they are of no account in politics, and I think by reason of that fact that they have been slaughtered by the thousands, and have been maimed and crippled, pauperized, and those belonging to them as a sequence.

I am not talking about something I am not familiar with, because I was reared among just that class of people. I have in my mind's eye now a dozen men who were youths with me, who have lost their lives in my own city, or adjacent thereto, in this terribly dangerous occupation, and I know when they passed away there was a regret in the immediate circle of acquaintances, but beyond that there was the mere notice that Joe Johnson or Mike Finnegan tumbled last night from the top of the car or was thrown from the train or was bumped by a freight-car and lost his life or his limb.

The CHAIRMAN. You desire legislation, and that speedily, that will give protection to these men engaged in this dangerous employment?

Mr. MELLEN. Yes, sir, and a number of States are in consonance with that sentiment. A number of us have been agitating it for ten years. They have acted and the Congress has done nothing, and we expect that it will begin doing something for that class of operatives very soon.

STATEMENT OF F. W. BLISS.

The CHAIRMAN. What is your name?

Mr. BLISS. F. W. Bliss.

The CHAIRMAN. Where do you reside?

Mr. BLISS. Boston. It is not my purpose to take part in this discussion, as I am expected to-morrow to appear before the House committee on this matter, but Brother Mellen has suggested a limiting of the time when this law which may be contemplated by your committee shall take effect. I think he has placed the limit too far ahead. The suggestion has come from Mr. Hains this afternoon that the railroad would wait until the last moment until they would do anything on this matter. It is admitted on all hands that there have been discoveries made which are an improvement over the old system of link-and-pin coupler, a system which is being used and improved constantly, and, as has been said before you, is constantly put on new cars. Now, I think that far as adjusting any method of coupling to a freight car is concerned it does not require but two years to put it on. Railroad men have already considered what is the best coupling, that they are improvements over the old ones, but instead of trying to find the most perfect coupling they should take the best ones they have within their means to-day and immediately apply them to their freight cars. Of course gentlemen will know that railroads are prone to use up their old railroad stock, and that perhaps railroad men would hardly feel like putting modern appliances on a good many of these old cars. I think, if a period of time is to be fixed, that six months would be ample time for the railroads of the country to put on the modern couplers.

Senator HIGGINS. And to determine what new improvement should be adopted.

Mr. BLISS. I do not suppose it would be possible to discover the perfect coupler within six months or two years or ten years. I expect progress is going to be made constantly in this matter.

Senator HIGGINS. Is it your proposition that the railroads within the six months shall determine the improvement and also apply it?

Mr. BLISS. Yes, sir.

Senator WILSON. Do you think it a physical possibility that every car in use in the United States within six months could be brought within the line you suggest?

Mr. BLISS. I do not think it would be possible for cars that are owned at a remote place and that are now in use to get back to their own shops to have these appliances put on. Take a car belonging in Washington. It would hardly be time to have the car sent there and have it done in their own shops, but I think this matter could be arranged so that these improvements could be made within six months, without their being made in the car shops, but perhaps where the couplers are manufactured. I can see that it would be impossible for all the freight cars scattered throughout the United States to be returned to their homes and equipped within that period.

Senator HIGGINS. Are you a mechanic?

Mr. BLISS. No, sir.

Senator HIGGINS. You do not speak as a mechanical expert?

Mr. BLISS. No, sir.

Senator HISCOCK. What is your business?

Mr. BLISS. I am a lawyer.

The CHAIRMAN. You are a member of the legislature?

Mr. BLISS: Yes sir.

The CHAIRMAN: You do not expect that any great amount of time will be consumed by the railroads in coming to a conclusion as to what coupler will be used?

Mr. BLISS: No; I think their minds are pretty well settled on that already.

Just one word while I am on that point with reference to brakes. The railroads already have had sufficient notice that the brakes they are using, not only on freight but on passenger cars, are not adequate. They have had a terrible accident in Quincy, where it was shown from the investigation that the six-wheel trucks have not the proper appliances.

Senator HIGGINS: In the way of air brakes?

Mr. BLISS: Yes, sir. They only apply to four wheels, and so long as the railroads can use their present appliances and rolling stock to the best advantage, perhaps, to the road, they will not adopt these improvements as rapidly as the public demand.

STATEMENT OF J. A. LAKIN.

Mr. LAKIN. Mr. Chairman, I can not agree with the gentleman who represents the railroads in regard to fixing no time for the adoption of these appliances. It seems to me that the committee should be competent to fix a time that would be reasonable.

The CHAIRMAN: What do you think a reasonable time would be?

Mr. LAKIN: I should say it would take three years, at least.

The CHAIRMAN: These general declarations are easily made, but when you come down to business we do not know what to do about it.

Mr. LAKIN: I should say it would take three years at least, from the fact that there are many cars in use that would have to be thrown away if you undertook to make it within a less time. There are a great many cars that do not get home, I assume, in a great many months, and it may be that those cars are used back and forth. While it is intended that a car should be shipped homeward as fast as possible, I presume that there are a great many cars that will not get home in two or three years. They will be used on other roads, and it would be quite a tax on the railroads to ask them to change the old cars and put on the new appliances.

Again, there may be, inside of three years, other inventions or improvements on the system now in use.

The CHAIRMAN: You would have the railroads wait three years before they decided whether there was anything better or not?

Mr. LAKIN: No, sir. I should say that the cars should be equipped within that time; or, if in the judgment of the committee, that time was too long or too short, viewing all sides of the question, they should fix the time. I fancy that if there were no time fixed, the railroads would take fifty years, if necessary, like the man who was going to buy a cook stove and stop using the old-fashioned crane when all the improvements had been made on the stove.

Now in regard to couplers, it seems to me that the committee should decide upon some principle and not confine the system to any one patent, but if a hundred patents can be made to interchange and carry out the same principle that would be satisfactory to the employes as well as to the State which I have the honor to represent.

The CHAIRMAN. All that the employes want is the ability to couple a car without the necessity of going in between the cars.

Mr. LAKIN. Yes, sir; that is as I understand it, and the couplers that have been shown here are, I think, a step in the right direction, that the system shall not be tied up to one particular kind of coupler.

Senator HIGGINS. Will it not have to be tied up to the kind you ultimately adopt?

Mr. LAKIN. No, sir.

Senator HIGGINS. Would it not require a very radical change?

Mr. LAKIN. I should say not. The previous gentleman was asked whether he was a mechanic. He said he was a lawyer. I am a mechanic. I think I can invent in three months fifty different couplers that will have the same principle in them and that will couple together and still be different patents.

The CHAIRMAN. Would they not be the same coupler pretty nearly?

Mr. LAKIN. No, sir, they would not. They would all be different, and you would say, to look at them in different towns or in different rooms, that they would not work together, but when they came together they would work just as nicely as if they were made just exactly alike.

The CHAIRMAN. You mean that there would be some little trigger different about them, but the one principle would be governed by one patent.

Mr. LAKIN. No, sir, it would not be. It would have to be covered by fifty patents for the fifty inventions. I say there should be a system adopted by the committee so that any invention that would work in harmony with any other patent and shackle and unshackle with any other patent could be adopted by any road. I do not care to take up more of the time of the committee; I just wanted to bring out that particular point.

STATEMENT OF S. E. WILKINSON.

The CHAIRMAN. What is your name?

Mr. WILKINSON. S. E. Wilkinson.

The CHAIRMAN. What is your position?

Mr. WILKINSON. I am the grand master of the Brotherhood of Railroad Trainmen, composed of conductors, brakemen, switchmen, yardmasters, baggagemen, and passenger brakemen and there are a few other people identified with the organization who have gone out of the railroad business.

The CHAIRMAN. Let us know what you think ought to be done in the premises?

Mr. WILKINSON. The question is a great deal easier asked than answered.

The CHAIRMAN. I have found that out myself.

Mr. LAKIN. We are very modest in our request. We want something done to better our condition; that is, to save our lives and our limbs. The organization that I have the honor to represent commenced by looking after the sick, taking care of the wounded, and burying the dead. It afterwards started out with a predetermination to become a labor organization, benefiting the condition of the men financially. How successful it has been in that one particular we leave the records to prove.

There has been a great deal of talk about automatic couplers. Those who are practical railroad men, and who are engaged in the switching and coupling and uncoupling of cars to-day, claim that they have

not found any device that reaches that standard of perfection which is desired at the present time. It is claimed that these various couplers are interchangeable. The men that we represent claim that they are not interchangeable. Under certain conditions, if they be favorable, they will couple, but as a general proposition, taking the different devices, they do not successfully couple or they do not successfully uncouple unless everything is in place so that it is advantageous to the draw-bar in question.

The CHAIRMAN. In the operation of the coupling of cars with these devices, does it ever occur that the switchmen have to go between the cars?

Mr. WILKINSON. Yes, sir, quite often; and it is a matter of presumption with a practical man that, so far as the devices at present in use, they will always have to do that. There is no device, unless it is the Miller—that is on the passenger coach—which does not require it, and sometimes they have to go under the platform to uncouple them. I have been identified with the railroad service for twenty years, for the larger part of that as a switchman. I have come in contact with a great many of the different devices, but during the last few years I have been identified in the labor world, and I know very little myself. I get my information from those I represent as to the practicability of the couplers that are used at the present time.

There is a great deal of difference of opinion among the men identified with this service as to what we want. Mr. Haines gave you a statement of what has already been done, and I would like to ask Mr. Haines or you the question if you understand by his remarks that he is in a position to-day, or the gentlemen he represents, to guarantee within a reasonable length of time that the same amount of progress that has been made in the past few years will be made in the future. He did not say anything about that.

The CHAIRMAN. Mr. Haines is here, and he can answer the question himself.

Mr. HAINES. I will say that the past is a pretty good guide to the future, and looking at what has been done and accomplished since October, 1890, with us I should say that the process of adopting an interchangeable coupler that can be coupled from the outside of the car without going in between is proceeding at an accelerated ratio. There are about 20 per cent of the cars so equipped to-day. I do not say that under no possible contingencies would it be necessary to go in between the cars, but I say that under no possible contingency is a man compelled to go in between the cars when it would be dangerous for him to do so, with the adoption of a release-rod connecting the locking device of the master car-builders' type of coupler.

Mr. WILKINSON. You, gentlemen, to whom have been delegated this highly pleasing duty of protecting the railroad men, I presume will take into consideration the fact that with the devices shown here at the present time our death ratio and our ratio of injuries are larger at the present time than they were before any of the new types of couplers came into existence.

Mr. HAINES. Will Mr. Wilkinson permit me to add one word to my statement?

Mr. WILKINSON. Yes, sir.

Mr. HAINES. I said in my statement that up to the time that 50 per cent. of the cars were equipped with this type of coupler the danger would not diminish, but that after that time it would decrease.

The CHAIRMAN. You claim that there is more danger at present than there has been heretofore?

Mr. WILKINSON. Yes, sir.

Mr. HAINES. It has increased, has it not?

Mr. WILKINSON. Yes, sir. My opinion as one of the representatives is very different from some of those of my associates. Still, I believe that as the master car-builder is not a practical railroad man, he does not go out and test these couplers from time to time, he is not perhaps in as good a position to find out the true condition as a man really engaged in that part of the service. I will say as to Mr. Haines's statement with reference to the composition of his committee, that I happen to be personally acquainted with these gentlemen, and know that they are all practical railroad men, that is, they all served at one time in the humble capacity of brakeman, but it strikes me that if the kind of coupler has not at the present time been put into service, it would be a good thing to have a certain number of men act in conjunction with the gentlemen he names, and, if you please, this committee or representative men that they could appoint, some of us who were disinterested. The idea as it presents itself to us to-day is that all of the railroads have a perfect right to equip their cars with any particular device they see fit. If anybody hands them a good patent, something that they believe is going to be the thing that they want, and that all the railroads will have to adopt, they will buy a certain interest in it. They will equip their cars, and those cars will come in contact with others that do not couple. Then it becomes necessary to couple two of those patent devices together and then the danger is increased proportionately. It is also a true statement that the labor connected with these men who are engaged in active service at the present time is increased each year about 1 per cent.

The amount of work that was done five years ago by an engine is now almost doubled. The work that was performed by one switchman five years ago, to-day is necessarily double. The pay has been proportionately increased.

It has been my misfortune to call upon several of the representatives of railroads in the last year asking for an increase of wages. This is the manner in which our proposition was answered: "Well, you men have been engaged in a political movement to get us to buy a certain kind of coupler. Now we are going to use the money that we ought to give to you to buy the coupler." So that we claim under those circumstances, if the President of the United States, if you please, and this particular committee, or all the humanitarians in the human race see fit to protect the interests of those who have been railroading for a number of years and have not been sacrificed up to the present time, it is not fair for these railroad managers to say now, if they make us adopt measures of that kind you will have to pay for it. That is one of the things we labor under as an organization at the present time.

This is the first time we have ever appeared here asking for anything.

The CHAIRMAN. You mean to say that the railroads intimate to you that if you gentlemen insist upon legislation looking to the adoption of a safety car coupler, they will reduce your wages in order to make up the amount which it costs them by such legislation to pay for the couplers?

Mr. WILKINSON. I stated that the labor had been increased and wages increased correspondingly. But in many instances during the past year I called on general managers and they said, there is a move-

ment of this kind on foot that we attribute to you men. If that is carried out we will have to take the money that we give to you and put it into this equipment that we will be compelled to put on. So that if they do put on the equipment we will have to pay for it.

The CHAIRMAN. Let me ask you another question. Suppose this automatic coupler, or some such coupler, were adopted by all the railroads, and also the air brakes, what would it result in as to the employment of men who have heretofore been doing this work; would it reduce the amount of labor necessary to run a railroad?

Mr. WILKINSON. I do not think so.

The CHAIRMAN. I have heard some one intimate that it would, but I do not know what the fact is.

Mr. WILKINSON. The statement has been made by some of the men who have been identified with this association that whenever you have all automatic couplers to power brakes, they will not need any brakemen or switchmen. But I have had enough experience to satisfy me that it does not make any difference whether you have an automatic coupler or not, you have to have a man who has a good head on him and a good deal of ability to uncouple them successfully. And there are many times when the air brake refuses to work when you use the old Armstrong or the hand brake. So that I do not think that there will be any decrease in the number of men employed, but I would judge that if they are more intricate than they are at the present time it would have a natural tendency to increase the number of men, because if things are favorable you can remove a pin in the old link and pin with very little slack and do it very quickly.

There are many things that could be done to better the condition of the man who works for a railroad. There are a great many of the general managers who have done a good deal to the betterment of the men's condition and we have always met with a great deal of fairness and we have been largely benefited. But we believe we have also largely benefited their service in this country. Still, we are not in a position to-day to say what any railroad company shall adopt as an automatic coupler. We do not believe anybody is in a position to-day to dictate to them what it should be, but we believe in order to amicably adjust this matter within a reasonable time that a committee of practical railroad men, men who have been switchmen for 12 or 15 years, be appointed, and if they have an opportunity to test these appliances after they have been passed upon by the committee spoken of by Mr. Haines and also recommended by the master car builders, they would know within a reasonable length of time whether the device was a practical one or not.

Senator HISCOCK. Do you think a committee of that kind would be more valuable than the association together of half a dozen of the most skilled mechanics, especially in respect of railroad appliances, whose business it is professionally to devote their whole time to the examination of every new device, and as far as they can to improve on those devices, and the railroads, as fast as they materialized something that they thought was an improvement, testing it?

Mr. WILKINSON. Yes, sir.

Senator HISCOCK. You think it would be better than that?

Mr. WILKINSON. Associated with the gentlemen that you speak of, as an inventor—

Senator HISCOCK. I am not speaking of an inventor. I am speaking practically of a commission, a bureau being organized that will take up all inventions, all devices for the improvement of couplers and brakes

and everything connected with railroad transportation, examine them, and on their report have the railroads put those appliances or devices into use and test them by actual use.

Mr. WILKINSON. As far as the coupler is concerned; yes, sir.

Senator HISCOCK. Would this committee that you speak of be any better than the brakemen themselves who use it?

Mr. WILKINSON. No. I would take my choice from the men actively engaged in the service of railroads, some railroads; a man who was constantly connected with coupling and uncoupling them each day.

Senator HISCOCK. That is what I suppose they do. If they take the cars with these devices and put them on the roads with a view of testing them, the results reported carefully and accurately, and whenever it is impossible to devise an improvement that it should be the business of these men to devote themselves to the study, at least, to see if they can improve it.

Mr. WILKINSON. I have been in the service twenty years, but I have never seen a committee of that character in my life.

Senator HISCOCK. I think you will find that there is just such a bureau as that in the New York Central system, in the Pennsylvania system, and in several other systems, and notably such a bureau as that which is created by these large car-building establishments.

Mr. WILKINSON. The Pennsylvania has got an equipment, with the Delaware, Lackawanna and Western, which has cut off more arms than anything of the kind on earth.

Senator HISCOCK. I am not speaking of that. I am coming down to the question of whatever they do in the direction of mechanical skill, if they do anything for the purpose of correcting just that. It always seemed to me that if they acted in good faith, if there were organized by a railroad system or by railroad systems combined a force of skilled machinists and mechanics whose sole business it was to investigate every invented device they could learn of and improve on it themselves, and if the railroads devoted themselves to testing those improvements, that there was hardly anything better than that that could be done in the way of a commission.

Mr. WILKINSON. It has been always the truth that there has always been a difference of opinion amongst men. My proposition is that if a man puts in fifteen years of his life as a practical switchman, and does not engage in any other service, that he is one of the most competent persons to judge of any adaptability in the line of switchmen of any other person in the world.

Senator HISCOCK. I believe with you that a practical switchman, taking two devices, would be the best judge as to which one he could operate with the greater facility and safety, and yet he might not have the least genius in the world for creating or inventing the devices in the first instance, or suggesting any improvement to it. Now, as I understand it—I may be mistaken about it—some of the large trunk lines that I have mentioned have had organized in their service a bureau of mechanics. They have had a force who were employed at nothing else, and as soon as they had perfected as far as they could a device or machine, it was put on the cars and tested by actual operation, by actual service, by men who are just what you describe, practical brakemen and practical switchmen.

Mr. WILKINSON. These air-brake cars are sent over the road under the management of a direct superintendent for the purpose of educating the men as to the action of air brakes. But so far as couplers are concerned I have never visited a test and never heard of one.

The CHAIRMAN. Have you anything further to say?

Mr. WILKINSON. I believe that covers all. We are very anxious that something should be done at as early a time as it is practicable.

The CHAIRMAN. As to exactly what that time is you are not prepared to say?

Mr. WILKINSON. No, sir; nor to make any suggestions. But the sooner the better.

Senator HISCOCK. Have you ever yourself put into form the legislation that you would propose?

Mr. WILKINSON. No, sir; I do not believe I have the ability to do that.

Senator HISCOCK. I might say that I never saw anyone whom I thought had.

Mr. WILKINSON. I agree with you on that proposition. I have one other expression to make.

Senator HISCOCK. I am glad we agree on that question, because that has always been the trouble, so far as I am concerned.

Mr. WILKINSON. We are paying \$37,000 a month to disabled brakemen and to the heirs of those who are killed. That is the amount we are paying each month at the present time, and instead of it decreasing each year it is increasing, so that the sooner some legislation is enacted in that direction the better. Anything that can be done to better our condition will not only be appreciated in so far as the saving of our lives and limbs is concerned, but in saving the small compensation which we receive for our services.

Senator HISCOCK. Let me ask you one other question, and I think that will be all. You have been connected with railroads in your present position for the last twenty years, which would make you pretty familiar with it. What do you say about the promptness with which railroads—I will say trunk lines that are able to do so; I imagine there are a great many small railroads built in some sparsely settled country which can not; but so far as corporations that we know of in the East, the Pennsylvania road, the New York Central system and the New England system—adopt new appliances? How promptly could the new appliances after they have been tested be put on the cars at the shops where the cars are built? What do you say about improvements in that direction within your own knowledge, say within five years?

Mr. WILKINSON. The Pennsylvania has made some improvements in that direction in the past five years. I can not say as to the New York Central; but if they have not it is high time they did. They have some of the poorest rolling stock in the United States. The roads west of the Missouri River, the Missouri Pacific, the Northern and Southern Pacific have adopted all the appliances within the last five years; within a year after they were perfected and put in use.

Senator HISCOCK. I asked that question because I have heard it stated by railroad men, I think in this committee, that there was no valuable invention for the saving of life and limb, that had been reported upon by competent people or had been discovered, where the railroad companies were able to make the change that they did not do so.

Mr. WILKINSON. The Pennsylvania has adopted the block system, I think, over all its lines.

Senator HISCOCK. I said I heard that statement made, that they did go just as fast with these improvements as they could under the circumstances.

Mr. WILKINSON. As far as air brakes and automatic couplers are concerned, as I have stated, the roads enumerated have been the first to

take them up. I would like to ask Mr. Hains if the Northern Pacific, the Missouri Pacific, and the Texas Pacific are members of your association. I have been given to understand that those three railroads at present are adopting what is known as the Safford drawbar at the rate of 1,200 per month. The statement was made by Mr. Hains as to their being a party to the interchangeable couplers that were presented here; and the Santa Fé is also putting on the old link and pin.

Mr. HAINS. That company is not a member of our association.

Mr. WILKINSON. The Santa Fé?

Mr. HAINS. No, sir.

Mr. WILKINSON. The Northern Pacific, Missouri Pacific, and Texas Pacific are?

Mr. HAINS. Yes, sir.

Mr. WILKINSON. I have been informed that they are putting on 1,200 of the old-fashioned drawbars. It is a new kind of an old-fashioned bar, known as the Safford bar.

The CHAIRMAN. Is it better than the old one?

Mr. WILKINSON. I am not in a position to state. Mr. Safford is here, and I am not working for any drawbar company. That has been a handicap for all men connected with this association. If they say anything connected with the drawbar they are accused of getting a certain per cent from the association. We have all been approached; but we have not got any money yet, I am sorry to say.

STATEMENT OF FRANK P. SARGENT.

The CHAIRMAN. What is your relation to the railroad business?

Mr. SARGENT. I am grand master of the Brotherhood of Locomotive Firemen.

The CHAIRMAN. Where do you live?

Mr. SARGENT. Terre Haute, Ind.

The CHAIRMAN. Please proceed to state what you think about this general subject, whether Congress ought to pass any act at all, and if you know what kind of an act you think should be passed, please tell us.

Mr. SARGENT. It is very evident to-day, Mr. Chairman, to one who associates and converses with the masses that the time has come for national legislation looking toward the adoption of proper appliances upon the railways of the country for safety to life and limb.

It is not my purpose to speak of the feelings that exist throughout the country in that direction, because it is manifest to every one that all have a kindly feeling for each other. But this question is one of grave importance and one that requires careful consideration, and I have yet failed to see in the many bills that have been presented to me the solution of this question.

National legislation, in my opinion, is to come, and it seems to me that what ought to be considered first is the proper steps to be taken by Congress in that direction.

We have heard to-day from some of the able representatives of the railway interests of the country as to the appliances which are now in vogue. We also conversed with the representative employes of the service, and they all tell us at this present time there is not a safety appliance as a coupler that meets the requirements of the service. Therefore, to introduce a bill into Congress to-day making a certain type of coupler the standard, and compelling the railroad companies of this country to adopt it within a specified time, in my opinion, will be an injustice to the corpo-

ration and an injustice to the employes. But I believe the first step necessary on the part of Congress in that direction is to find a means to determine what the best appliance is, and, when that has been determined, then act in conjunction with the railway employes, the railway officials, the masses at large, in having that particular device adopted.

The CHAIRMAN. Now please tell us how to find it.

Mr. SARGENT. The suggestion I have to offer is this, that a bill be introduced in Congress providing for the appointment of a commission, that commission to consist of a number of practical railroad men taken out of the service, and a number of practical railroad officials representing the roads themselves, and let that commission be empowered with authority to hold tests, to call for these gentlemen who have this innumerable number of devices, all claiming to be just the thing needed; let them equip cars, put them into service, and let it be demonstrated beyond a doubt as to whether that particular device is the proper one or not. When that is arrived at, then Congress can pass a law requiring the adoption of that particular device within a specified time.

It does not seem to me that it would be just to-day to the railroad employes, to the railway managers, and to the public at large for Congress to introduce a bill, and pass it, compelling a certain coupler to be adopted, when no one knows that there is a coupler to-day that has the requirements in every particular.

I have had some little experience in railroading. I come in contact constantly with the employes day after day, and the general expression of the men in the practical service is, the thing that we want has not yet come.

It is very manifest from the position taken by the president representing the railroad associations to-day that they are adopting a certain plan or a certain style of coupler, and yet upon his own statement he admits that that is not yet sufficiently carried forth as to be warranted in making that the universal coupler.

Now we want legislation. The masses demand it. They are appealing to Congress for it, but we want to be fair to the men who own the property where we are employed, and we do not want to force upon them a device which has not been tested and proved to fill the requirements of the service.

Therefore, Mr. Chairman and gentlemen, I take this position: That the step necessary on the part of Congress is to provide a measure whereby a commission of gentlemen can be selected who can make these tests, and when they have made these tests and have themselves specified that they have gotten an appliance that meets the requirements as to the saving of life and limb, but from an economical standpoint—that wants to be considered also—then report back to Congress or to the Interstate Commerce Commission, or whatever may be designated, and that time will be the proper time to pass an act compelling the adoption of that device.

The CHAIRMAN. Suppose the commission was created for the purpose you indicate. How would that commission be expected to find out what the best device was?

Mr. SARGENT. The suggestion I would make would be this, that this commission after being clothed with authority, request that a certain number of cars be equipped with these several devices, go into some yard where there are intricacies of switches, curves, grades, and put them into practical operation. Let that commission be composed not only of men in actual service, but men who are in the mechanical de-

partment of the railroads, master car-builders, and men of experience in design and invention, and there and then test those appliances to their satisfaction in all the different ways that can be thought of, putting them to all tests, and when they have found the most practical, the most economical, the most life-saving one, I feel satisfied in saying it will meet with universal approval, and very little legislation will be necessary to have it adopted.

I take this position to-day: It is just as much to the interest of the railroad managements of this country to have safety appliances as it is to the employés, and more so, because when employés are injured they get the condemnation if they do not have safety appliances on their equipments every time.

They are looking in that direction. We can see statistics here to-day which they have given us to show they are moving in that direction. Now, the employés ask you to act on this movement in a judicious way. We do not want to do anything unjust. We want to be fair, but we want to hurry this movement forward. We believe a commission should be appointed by this Congress, or an act rather should become a law at this Congress providing for a commission in some way.

Let these tests be made. Let the commission make a report, and when they have made their report, in our judgment, we believe the solution will be solved and the appliances will be found that will meet the requirements, and they will be put on. That is my position, and that is all I have to say.

The CHAIRMAN. You seem to be at the head of the Brotherhood of Railway Firemen.

Mr. SARGENT. Yes, sir.

The CHAIRMAN. Have you had any relations to the switching business.

Mr. SARGENT. I ran a switch engine for some months, and worked in the yard with the men.

The CHAIRMAN. Do you reflect the sentiments of the men themselves who are engaged in that special calling?

Mr. SARGENT. I am not speaking for the switchmen; I am expressing my own sentiments and the sentiments of my colleagues with whom I come in contact, and I form my opinion from conversations I have had with men who have traveled over the country. I am not speaking for any particular body of men. That is not my purpose. I was invited here to give expression of my views.

The CHAIRMAN. The reason I make those inquiries is because I want to find out whether you are familiar with the business, and whether, in the light of your own knowledge on that subject, you believe the suggestions you make are the right ones.

Mr. SARGENT. I will tell you why I believe my suggestions are right with regard to the commission being composed of practical men out of service as well as those who have control and management of the railroads, in order that no one may raise the question that there is any partiality shown towards any particular device on account of the financial backing which that device has.

I am speaking for the employés, and I want them to feel confidence and have confidence and feel assured that their interests are being protected. The railroad employés of this country to-day are looking to you, gentlemen, who have come here, who in a measure represent their interests, and when they feel confidence in what is being done, let men be selected from the rank and file who do the work to act in conjunction

with the men who might be selected from the management of the roads to apply these tests.

The CHAIRMAN. You can understand that if we carry out the suggestions you make we would pass a bill for a commission at this session, and at some future time we would probably be required to enact some additional legislation before we would get to the point of settling what should be done by the railroads, and in the meantime the killing of these men and their injuries would go on, and you think that would be going as rapidly in the direction of protecting the employes as they would think we ought to go?

Mr. SARGENT. Yes, sir; taking into consideration the expressions of the men that there is not a device in existence to-day that meets the requirements, and it being the object of Congress to pass a bill compelling a certain type to become the standard and forcing the railroad companies to adopt that within a specified time.

The CHAIRMAN. Suppose, when we passed the bill, there is no new device. Then what will we do in order to meet the requirements?

Mr. SARGENT. If you have a commission composed of practical men with a mechanical understanding and knowledge, if there are any of those devices that are put to the test that do not meet the requirements, it can be pointed out wherein they are defective. We have had presented to us to-day elaborately a certain type which has been considered practical to a certain extent. They are recommending and adopting it throughout the country. It is applied in the manner I have described, but the question is whether it is practical or what necessary changes could be made in order to make it so. I do not feel that the delay of one session of Congress in the matter of passing this bill would be detrimental to the masses at large. First I believe in finding out what you want, and then passing legislation compelling its adoption. Do not compel the adoption of something before you know whether it is what you want or not.

The CHAIRMAN. I ask you the question more especially because at a previous session I introduced a bill providing for a commission and it was regarded by the country as not the best thing to do. So we have been going along trying to find out what was the right thing to do up to this present time, and we have not yet found out to a certainty.

Mr. SARGENT. I am simply expressing my views as to what I believe would bring about the most practical results. That is only my opinion, and I believe that the railroad employes should be the men who ought to be considered in this legislation.

I am sorry that there are no more railroad men right out of the ranks. What I mean to say is everyday men, men with their hands begrimed with toil, working and handling these cars, who can explain these points that they observe every day. They are not here. I can not speak for them as they can speak for themselves, but I believe when a matter of this importance comes up and you talk of national legislation compelling the adoption of a standard coupler those men should have something to say about it, before that law is enacted.

The CHAIRMAN. I thought so myself. Mr. Downey, I believe you are one of those men?

Mr. DOWNEY. I believe so, sir. You can take a look at me, if you please, in order to confirm that. [Exhibiting his hands.]

STATEMENT OF JOHN DOWNEY.

Mr. DOWNEY. Mr. Chairman and gentlemen of the committee, the desire of the switchmen as they have expressed it before conventions on three different occasions was uniformity in the coupler. It does not make any particular difference to them what coupler is adopted. At least they did not express any desire for any one that was in the market. They simply desired some coupler of uniform kind to be adopted by all the railroads. I agree with Mr. Sargent in regard to the proposition he has made that a commission be appointed or a bill be drafted and put through Congress for a commission to test these various drawbars, but in so far as the composition of that committee is concerned I do not believe the switchmen care who compose the committee, even if it is composed wholly of general managers, wholly of car builders, or if it is composed wholly of members of Congress. It does not make any difference to the switchmen so long as a uniform coupler can be adopted, so that the conditions can be known to the men who are at work.

Take a drawbar on cars. They are a good deal like a mechanic's tool to the switchman. If he understands just what he is going to find on the car his danger is lessened to a great extent. But if he finds every different kind of a drawbar there, he does not know the moment he will lose his hand or arm, or even his life.

I do not here desire to advance any theory or anything of that description, and I am not here for that purpose. My practical ideas on the subject are simply that uniformity must be observed in regard to the coupler question, and the sooner you get to that part of it the better it will be for the men who are employed in the business.

We are paying to-day in the neighborhood of \$16,000 a month for deaths and total disability in the organization.

The CHAIRMAN. What organization.

Mr. DOWNEY. The switchmen's organization, the men who do the coupling.

The CHAIRMAN. I think it has been testified here that the Locomotive Brotherhood are paying over \$30,000 a month.

Mr. DOWNEY. They have an organization composed of brakemen, switchmen, and baggagemen, and several other classes in the railroad service, while we are composed wholly of switchmen and are paying in the neighborhood of \$16,000 a month for death and total disability claims.

The CHAIRMAN. Are you paying that out of your own pocket?

Mr. DOWNEY. Yes, sir. Out of the wages that the men draw they pay a pro rata assessment on each death.

Another obstacle for them to contend with is the condition of the tracks in the yards. The frogs are not cleaned and the guards are not cleaned, and various piles of rubbish are allowed to lay around in the various yards of the country and a switchman has very little chance to escape, so that when he goes to work in the morning he does not know whether he will come back alive at night or not.

That was the position I held for nineteen years while I followed the business. I went out in the morning, expecting to come back on a shutter.

The CHAIRMAN. You did not come back maimed all the time?

Mr. DOWNEY. I came home maimed four different times, but they did not kill me.

The CHAIRMAN. Where do you live?

Mr. DOWNEY. Chicago. I have resided there thirty-three years.

The CHAIRMAN. Is there anything in the question of the length and height of the draw bar?

Mr. DOWNEY. They want it uniform all around, height, style, and everything in connection with it.

The CHAIRMAN. What you want is uniformity?

Mr. DOWNEY. Yes, sir; what we want is uniformity.

The CHAIRMAN. So that the cars can be interchanged without difficulty and without endangering life in trying to have it done?

Mr. DOWNEY. I do not know in regard to interchangeability, but if they would adopt one type of draw bar there would be no need of interchangeability.

The CHAIRMAN. Would you think it would or would not be wise to pass a bill providing for a commission to determine anything, or would you prefer that we should provide uniformity by act direct?

Mr. DOWNEY. I think if you could provide for uniformity by act direct it would be the best thing possible. It would get around this business sooner than it would by a commission being appointed. If you have got the power to provide for an act direct, I believe that would be the best way.

The CHAIRMAN. Of course Congress will not undertake to legislate as to a particular kind of coupler. We do not know anything about those devices particularly; but if a device could be so described or there could be such a use of language as to require uniformity in the use of couplers, air brakes, etc., and at the same time leave the railroads open to determine for themselves, it might be done by act without any commission.

Mr. DOWNEY. We are willing to allow a board of railway managers to sit on the business.

The CHAIRMAN. The switchmen are not particular as to how it is arrived at so that uniformity is brought about?

Mr. DOWNEY. No, sir; they do not care who sits on this commission or who acts on this committee that is going to test the appliance.

The CHAIRMAN. Our friend, Mr. Sargent, stated a while ago that the general understanding was that there was no device that was satisfactory now.

Mr. DOWNEY. I guess there are about one hundred. If there were only one of them satisfactory the other ninety-nine could be thrown out.

The CHAIRMAN. You think the adoption of any one of them would be fairly satisfactory?

Mr. DOWNEY. It would lessen the danger 90 per cent.

The CHAIRMAN. Is it or not so that as things are now, this mixing of different types, the danger is more than it was before?

Mr. DOWNEY. It makes it a good deal more dangerous.

Mr. KING. Mr. Chairman, I would like to ask Mr. Downey a question.

The CHAIRMAN. You may do so.

Mr. KING. I would like to ask you, Mr. Downey, if the couplers of the car-builders' type do interchange or couple regularly when they come together or not?

Mr. DOWNEY. With very many in this country you can not unless you use the link and pin, and it is difficult to couple the same type in several yards. I have coupled them only a year ago.

Mr. KING. What is the trouble?

Mr. DOWNEY. I do not know. It is an impossibility for anybody to

tell. They look all right, but they will not lock. It is impossible to bang them hard enough together to get them to lock. Then you have to use the link and pin.

Mr. KING. Do you often have to use the link and pin where there are two different kinds of car-builders' type.

Mr. DOWNEY. Often. I did the west-bound for the Pennsylvania at Fifty-fifth street. I guess on one coupling out of every five of the Master Car Builders' type I would have to use the link and pin to couple it.

The CHAIRMAN. Does the switchman have to jam them together himself in order to lock them?

Mr. DOWNEY. The engine forces them together.

The CHAIRMAN. On two different cars coming together?

Mr. DOWNEY. Yes, sir. You have to go into nine-tenths of them to open them in the first place. They are not automatic, as they seem to be. You have to raise up the lever and have to reach in to open the knuckle in order to couple them.

The CHAIRMAN. If that is so, what good would it do to put them on any car if you can not lock them together except by going between the cars? That is what we are trying to avoid.

Mr. DOWNEY. There are some of them that open automatically, but the majority of them will not—not far enough to allow the coupling to be used.

The CHAIRMAN. Your judgment is that that is not a good coupler?

Mr. DOWNEY. I am not speaking of any particular coupler at all, but am simply stating my opinion.

Mr. LAKIN. Is it not a fact that a car that is loaded coming in contact with a car of the same kind that is light is the cause of their not coupling?

Mr. DOWNEY. I never had time to stop and examine.

Mr. LAKIN. The difference in the height of the car, I should presume, might make some difference.

STATEMENT OF AUGUSTUS D. SHAW.

The CHAIRMAN. What is your relation to railroads?

Mr. SHAW. I am not in the service at the present time, but I have served as a brakeman, conductor, and yardmaster for twenty-six years.

The CHAIRMAN. Were you ever a switchman?

Mr. SHAW. Yes, sir. That is what we call a switchman; a yardman.

The CHAIRMAN. Where do you live?

Mr. SHAW. My home is Indianapolis, Ind. I am residing here at the present time. Two years ago I resigned my position as assistant yardmaster of the Big Four Railroad at Indianapolis, Ind., since which time I have been in the Government service.

When I left the yard ten nights previous to my coming here I laid down the link and pin to accept a position under the Government. I promised the men in the yard there whom I left that whenever I had an opportunity to say anything pertaining to their welfare with reference to this matter of safety appliances I would make it my business to perform that duty. Since I have been here I have been before this committee once before. I have appeared before the House Committee on Railways and Canals and I have been before the commission that was appointed which met at New York last November. I was instructed by the president of the Yardmasters' Association to appear here at

this meeting and express to the members here present their views, which are my own, in reference to this matter.

I have always seen the necessity of a uniform system of drawbars being provided for. Gentlemen, as I said before, my life has been spent in that business and in the most hazardous part of it as a switchman. Ten years of that time has been spent in switching in the yards. I know the dangers pertaining to that and you have before you one who has passed twenty-six years of that service who is living. I will not say that I have escaped without receiving injuries. I have had portions of my fingers taken off; I have been squeezed; I have had a part of my elbow nipped off; I have been in collisions; I have been thrown from cars and squeezed between the bumpers, and therefore I speak as a practical yardman knowing something of the dangers of this business.

I was down at Indianapolis a year ago and of course I made it my business to go among the boys again to meet with them. That class of men I have associated with the most of my life. Almost the first words those men asked me were:

Shaw, what are they doing down in Congress in reference to safety appliances?

Here is Bill Gray, last night, who just got his arms smashed off.

There is John Jackson. We want you to go over and see him. He got his foot cut off in a coupling between an automatic coupling and a link-and-pin coupling.

Those were some of the first expressions I heard among those men. I told them that I believed that Congress was in earnest in this matter, and I knew to my knowledge that they were taking evidence and listening to the views of railroad men on this great question, and that I believed they were earnest and felt disposed to do something in reference to this matter.

They feel the need of legislation. They need it, and they ask for a uniform drawbar, a uniform system of coupling, and they ask Congress to provide and make a law to that effect. The Yardmasters' Association, which I represent here to-day, have asked me to make that statement, that they want uniformity and they want legislation by Congress to that effect.

Of course I have my own theory about how that should come about in reference to the drawbar question. I want to state right here, gentlemen, that I would first pass a bill making uniformity, and then let the drawbar be selected afterward. That is where I differ from Mr. Sargent on that question. He and I agree on a great many points with reference to it; we want uniformity and we want legislation by Congress. I believe in passing a bill making uniformity a law, and hereafter selecting a drawbar. In a bill that six months after the passage thereof I would provide for uniformity, and at a certain date and a certain place representatives, say two or three of each of these labor organizations in the railroad service, engineers, firemen, brakemen, switchmen, conductors, trainmen, yardmasters, should meet with a committee of the master mechanics, master car builders, and general managers, and then and there select the kind of device to place on the car. That is what I favor. That is what they want.

If you gentlemen could have seen what I have seen during my life in reference to these matters, the suffering and the dangers which these men have passed through, you would think it was high time that something should be done in the way of giving these men protection in their dangerous duties; and I speak as one who has gone through these great troubles that these men are suffering.

That is about all that I have to say, unless you desire to ask me any questions. I only express myself this way, that they are in favor of

uniformity and that they are in favor of legislation by Congress to that effect. It is not so much the kind of a drawbar as it is a uniform system of coupling.

Mr. MOSELEY. I wish to make a statement. Mr. Spencer Smith has asked me, as secretary of the committee on safety appliances, to hand to this committee a bill which he asks to have introduced, and which is his contribution to this matter. The bill has been prepared by Mr. Smith, has received the sanction, so he states, and as I understand, of Mr. Rogers, and also of Mr. Hill, who are members of this committee of which Mr. Crocker, whom you heard this morning, is chairman. I simply want an opportunity to present that bill.

At 4 o'clock p. m. the committee adjourned until Wednesday, March 2, 1892, at 10 o'clock a. m.

WASHINGTON, D. C., *March 2, 1892.*

The committee met at 10 o'clock a. m., pursuant to adjournment.

Present: Senators Cullom (chairman), Hiscock, Chandler, Wolcott, Higgins, Harris, Gorman, Jones, and Barbour.

The **CHAIRMAN.** We will hear Mr. King first.

STATEMENT OF JOHN H. KING.

Mr. KING. Mr. Chairman and gentlemen of the committee: I desire to give the committee the result of my investigations and the conclusions which, so far I have been able to reach, and to say to you how the situation looks to me and what, it seems to me, the remedy under the circumstances ought to be. I think Mr. Moseley said something to you about his experience in relation to this coupler question, and I desire to talk on that question only; the other matters are quite simple in comparison with it. The anxiety of the people in relation to this most important question need not be discussed, nor the necessities of the case stated, because you are all familiar with these facts. We are killing a man and wounding about twenty every day under the present system. I think Mr. Moseley also quoted Judge Cooley. I could not help thinking how like my own their experience was in this respect, for when this question first came up and I began to investigate it, it seemed to me that the situation was just exactly like the statements made to you as to how it is now and in relation to what they were doing; that is, that it would soon solve the problem itself.

Mr. Haines in his talk, and some other gentlemen, would have you believe if this thing is let alone it will take care of itself and solve itself very soon. Whether that statement is born of the wish that nothing be done and that they want to be let alone or not, I will leave for others to determine; but instead of its becoming more simplified and there being more likelihood of its being settled than ever, it looks to me from my standpoint that every day it is getting farther from a settlement, getting more complicated and more complex and killing more people, and that in the trend of affairs it must naturally get worse.

Senator **HARRIS.** Is it true that they are applying this type of coupler, known as the master car-builders' type of automatic coupler, to 30,000 cars a month?

Mr. KING. I tell you how they get that, Senator. Here is a road that will order a great many couplers. Take the Sault Ste. Marie, which is

managed by as good a railroad man as there is in the United States, Mr. Underwood, whom I have known for many years. They purchased the master car-builders' type and equipped all of their cars with it. This was set down as so many couplers "sold and used;" but they discarded the couplers and they are now out of use. That is the way they obtained an estimate.

Senator JONES. Was not that true?

Mr. KING. They bought the couplers, but they are set down as being "in use." Every one of his cars were equipped with it, and every one of them has been taken off and piled up as old iron, because he says they are a failure. Those are marked down as being "in use," and when the car couplers go out as sold they are marked down as being "so many cars equipped," and when they go out of use there is no means of telling how many have been taken off of the cars. That is true all over the country.

Senator HARRIS. Mr. King, is the committee to understand that the railroads of this country are purchasing 30,000 of these couplers a month to be piled up as old iron?

Mr. KING. Yes, sir; some of them are doing it. The men will not have them. They can not use them.

The CHAIRMAN. Why not?

Mr. KING. Because they will not work; they will not interchange.

Senator JONES. They ought not to be used if they will not work.

Mr. KING. The truth is that they will not interchange with other car couplers; they will sometimes. They will work and interchange, and then in the next few hours they will not interchange.

Senator HARRIS. Do they or do they not interchange with each other?

Mr. KING. No, sir; they will not all the time. I do not speak of this because I am in favor of or against any coupler, but I am speaking of this as the trouble that stares me in the face in attempting to come to a conclusion about the matter. For instance, I will read here a letter from the general manager of the Flint and Pere Marquette Railroad. In speaking about that he says:

I must say, however, that the large moneyed interests which certain railroad men have in particular types of couplers will prejudice the selection of a coupler when voted upon by the various railroads in interest, and that the result aimed at, *i. e.*, the safest appliance for protecting the lives of railroad employes, may not be reached on that account.

That is from Mr. Baldwin, the general manager of the Flint and Pere Marquette Railroad Company.

I speak of this not because I have come to a conclusion or have settled in my own mind upon any particular coupler, but here is one railroad company, with their money invested in a coupler; of course they do not want to throw it away. They think that will do as well as any other.

The trouble with the master car-builders' type is that there are so many different types and kinds that when they come to interchange they will not work. That is the trouble that we have found.

The CHAIRMAN. So many different kinds of the master car-builders' type of coupler?

Mr. KING. Yes, sir.

The CHAIRMAN. They are not all alike?

Mr. KING. No, sir. When they are new and everything is all right and the circumstances are favorable and at some particular times the men tell me they will couple, but they say that here is a car or two cars equipped with the Janney and the other with the Gould, and those two

cars will sometimes come together in the same day and they will couple all right, and the next hour or so they will not do it, and the men will have to put their hands in between to make the couplings. Sometimes they do and sometimes they do not couple, and they can not exactly tell why, but the fact is they do not work.

Senator JONES. Are you a railroad man?

Mr. KING. Only by being a railroad commissioner. I have been interested in this question for a good many years.

Senator JONES. You have had no personal experience with railroads?

Mr. KING. No, sir.

Senator HARRIS. What is your remedy for the evil?

Mr. KING. I will try to give you that. My remedy is that some particular type of coupler must, in some intelligent way, be settled by some power other than those directly interested in that coupler.

Senator JONES. Have you any interest in any coupler?

Mr. KING. None whatever in the world.

Senator JONES. You come here as the representative of nobody but yourself?

Mr. KING. I am a member of the committee on safety appliances of the national committee of railway commissioners.

Senator JONES. Do you come here as a representative of that committee?

Mr. KING. Yes, sir; just the same as Mr. Crocker and other gentlemen. I have not a particle of interest, either directly or indirectly, in any coupler.

The CHAIRMAN. You say you are a member of the committee of which Mr. Crocker is chairman?

Mr. KING. Yes, sir.

Senator HARRIS. You say that couplers of this type will not interchange?

Mr. KING. Yes.

Senator HARRIS. The understanding of the committee has been that the coupler of the master car-builders' type has in the last few years been very largely used and that there were from 175,000 to 200,000 cars equipped with them and that they would work interchangeably.

Mr. KING. You must understand that there are some forty or fifty of these types.

Senator HARRIS. There are various specific devices all understood to belong to that type?

Mr. KING. Yes.

Senator HARRIS. You say that will not do; that you have to be more specific?

Mr. KING. Yes, sir.

Senator HARRIS. Does not your theory bring it down to the adoption of a specific coupler?

Mr. KING. It does. That is the difficult problem that you have got to solve, and until you do it in a disinterested, intelligent way, you can not keep from killing the men as long as you have this great variety of couplers.

I have looked over this matter, and, as I said, Mr. Cooley and Mr. Moseley gave me their testimony, and it was this: They thought this was going to settle itself easily years ago; that it was going to be the master car-builders' type. The more we got into it the more complex it became because of the varied interests. The Atchison, Topeka and Santa Fé will not use the master car-builders' type and a large number of other roads will not. The Illinois Central have refused to use it.

They say they can not; that it is constantly killing the men; that they would rather have the old link and pin than this multiplicity of type, and until some particular type of coupler is settled upon, it is all nonsense to try to do anything at all.

Senator HARRIS. I will ask you if any change from the link and pin to an automatic coupler will not, in the transition stage, necessarily increase the danger to the trainmen?

Mr. KING. It can not be any worse than it is. It would not be so bad if they only had one kind of coupler to contend with. They would know what they had to contend with. As it is, they do not know whether it is a Gould or a Janney or a Hinson, or whether it is the automatic link and pin, or the old link and pin, that is coming. They have to make these couplings at night and they do not know what it is, and there is the trouble. If they knew what coupler was being used they could get along. If you had one particular type of coupler they would know exactly what they had to contend with.

In brief, my theory is this: That the only way that you can do and the only way in which this question can be settled is by a commission, which must be composed of railroad men and of others also who have no interest in railroads, because if you took all railroad managers you might get men interested in some particular coupler. If you took railroad employes, who do nothing but couple the cars, it might not be fair to other railroad people. So my theory about this is that it is too big, too intricate a question for Congress to settle, and I will tell you very frankly that I am very much discouraged about getting it settled, and the longer I investigate it and the more I have seen of it and the more testimony I hear about it the more complicated and vexatious and discouraging it is to me.

Why dally about it any longer? You gentlemen can not act intelligently, for it is too intricate a question. Somebody must make a study of it. My theory is—and I have prepared a bill which is identical with Senator Cullom's bill, except the first three sections. It provides that a commission is to be appointed, to consist of seven men (you can make it any number you like); whose duty it shall be first to take the testimony of these railroad companies; take the votes by cars. They will not agree; no 60 per cent, nor 40, nor 30 per cent will agree on one coupler, but take it for what it is worth. Then take the testimony of the men who couple the cars, and take that for what it is worth. Let them weigh it; make practical tests and whatever tests they deem advisable and proper, and travel over the country and give the question their attention, and then let them decide.

Then, for fear that there may be some wrong done, for fear that there may be some mistake made by that commission, and it is a very important matter, I provide in this bill that they shall make a report of their conclusions and findings to the Interstate Commerce Commission, after settling all the questions and taking all the testimony of all railroad employes, and of all railroad companies, and general managers, and everybody. It will be a big job; they can do it within a year. Let them make the report of their findings of what coupler they are agreed upon, and they will have no trouble in finding one good coupler. Then let them report to the Interstate Commerce Commission, and if the Commission approve of what they have done, then let the President issue his proclamation declaring the particular stand or type of coupler. If the Commission do not approve I provide for them to report to Congress, and let Congress have the benefit of their experience and investigation.

Then, in order that you shall not be given trouble about monopoly, that no one man who owns this particular type of coupler may have a monopoly and be able to extort from these railroad companies, I provide that each person who brings his coupler to the commission shall file with it a bond stating for what he will transfer his patent right to the United States, or it can be provided, if you prefer, that the royalty shall be only 50 cents a car or some small amount, so that there will be no extortion, and so that the man who owns the patent can not sit back and say "You can not use my coupler," he having the patent to it. You can provide, if you prefer, that he shall deed it to the United States, and then make it free, or else provide that the railroads shall use it and the royalty shall be 50 cents, or whatever may be deemed proper for its use.

Then, by that means, you prevent extortion; by that means you come to a conclusion, and a legitimate conclusion, and it seems to me it is the only intelligent way out of the woods on this subject.

You gentlemen want this thing to be done as cleanly and as straightforward as it can be done. Congress is charged with having some job in some particular coupler. Now, this commission will have to assume the responsibility and perform the duty, and it can do it. In order that it may be divested of any job, I provide that the commission shall take testimony and report to the Interstate Commerce Commission, and then if the Interstate Commerce Commission agree with them, the President shall issue his proclamation, and we will have the result of it right away. If they do not agree, the matter is to be reported to Congress for whatever disposition seems to be best from the result of their investigation.

The trouble about this matter, as I have said, is the great interest that has already become invested. The Pennsylvania line, for instance, is using only one particular type of coupler—

The CHAIRMAN. What is that?

Mr. KING. One type. I do not know whether it is the Janney or not.

Mr. MOSELEY. Yes, sir; it is the Janney type.

Mr. KING. Now, then, what they would like would be to compel every other railroad to use that particular type of coupler. They want to bring every other railroad company to their manner of thinking, and the other companies say, "Our judgment is as good as yours and we will not come to your way of thinking and you can not drive us." That is the disposition of the railroad managers. They do not want legislation. They fear there may be a mistake in the selection of the coupler or that they will be compelled to throw away their investments. For instance, the Pennsylvania, if some other type of coupler should be adopted, would have to change their cars. The Santa Fe, if some other coupler were to be adopted, would have to change theirs. They use the automatic link and pin. They say it is the best. I do not know anything about what is the best. I know there is enough in the record and the investigation we have made and the testimony that has been taken to convince me that there is no man in this country who is egotistical enough to stand up and say, "Here is the identical coupler that will satisfy everybody." I would not want to take that responsibility. If you have that responsibility put upon you, Mr. Chairman, you would discharge the duty just the same as any man would discharge his, and do the best you could, and then we would get a uniform-coupler.

This bill, as I say, is the same as that introduced by Senator Cullom, with the exception of the first three sections. I want to say a word to the committee further in relation to this matter.

Of course I know there is a feeling of economy pervading the country at this time, but there is no question before Congress which is as important as this. We are killing a man every day. They all admit that if we had a uniform coupler that would be reduced 90 per cent. Railroad men, employes and all, agree that if we had one automatic coupler that would be reduced 90 per cent. I think that is the uniform testimony.

The CHAIRMAN. The railroads are killing a man a day, and about how many are being injured?

Mr. KING. Twenty a day. They have killed 40 or 50 men since you began considering this question this Congress, and on an average 20 a day have been injured. All of them say the reason is because they do not have some identical, uniform coupler. How are you going to reach that question? No man can intelligently get Congress to say what it ought to be. You would not feel like saying what particular type should be adopted without knowing more about it than you do. It seems to me that it would be folly to ask Congress to settle it. The railroads can not settle it. Here is one railroad manager who practically says I am right. Railroad men are stubborn people. They are intelligent; they are strong. The manager of the Santa Fé says "I know just as much as the manager of the Pennsylvania." The master car builder, or who ever he is, on that line says "I know just as much as they do. That is not the thing I want. I want some other type." I think the Santa Fé uses the Safford coupler. I know nothing about the types. They have got their interests established and you can not drive them. They can not agree; they just simply will not agree. You have got to get a jury or some person to sit upon the question and compel them to agree, and you never will arrive at any conclusion until that is done in some way so that they are compelled to agree by some positive statute, providing for prompt action.

Two or three years ago I find that the master car-builders said they settled this and that and they fixed this and that. I find that while these companies, the Pennsylvania line and a few of those lines, have adopted the recommendations of the master car-builders, yet they are manufacturing other types and putting them on all the time. There are certain companies that have adopted that type; but there are others that will not. The Grand Trunk absolutely refuses to use it. There are a dozen or fifteen of the biggest roads of the country that refuse to use it.

The CHAIRMAN. Suppose we should say that there should be a system of coming to a conclusion and providing for the adoption of some specific coupler, how long a time do you think the railroads ought to have in order to comply with the law?

Mr. KING. I think that they would be able to equip from 10 to 15 to 20 per cent per year.

The CHAIRMAN. It would involve the necessity of throwing away a good many couplers?

Mr. KING. Certainly. They are constructing more cars. I think I am right, I have not the statistics to back me up, Mr. Moseley could tell better—I think they are constructing three times as many cars in the United States that have not the master car-builders' type as those that have the master car-builders' type; while they are equipping one-third of the new cars with master car-builders couplers the other two-thirds are equipped with different kinds. I tell you that the determination of the railroad companies of the United States to have their own way, each railroad for itself, is three times as strong as it was when I com-

menced to investigate this thing. The Pennsylvania company have got their million dollars invested in this and they say they will not use any other. The Santa Fé says the same thing as to the coupler they use. The Grand Trunk say they will not use the master car-builders' type. There are railroads by the dozen over this country who say they will not use it, and they stand there with their teeth set and their fists clenched, and that is the situation. They say, "We will fight." You can not get away from that. This has been going from bad to worse. The number of men being killed every year has been increasing.

Senator GORMAN. Where do you get the statistics about that?

Mr. KING. By taking the statistics of 1887 and bringing them right up, you find that the number of killed is increasing; that we are killing one man every day.

Senator GORMAN. Where is that information gathered?

Mr. KING. In all the reports of people killed. We have them here.

Senator HARRIS. At what point is it concentrated?

Mr. KING. In the report of the Interstate Commerce Commission; it is authentic. There is no disagreement about that. They concede that point; they agree.

Senator JONES. That it is getting worse?

Mr. KING. Yes, sir; all the time. There is not a man who can stand up before you and say that is not so.

Senator JONES. Is the number of men killed in proportion to the mileage of railroads increasing?

Mr. MOSELEY. Yes, sir.

Mr. KING. All the time.

Senator JONES. If that is so these improved couplers are doing more harm than good?

Mr. KING. I think the report will show that even the Pennsylvania Railroad, which must handle the cars of other companies, is killing more people now than they were before, by reason of the different cars coming to them with other varieties of couplers.

Senator HARRIS. Will not that necessarily be the case? Even though we should decide to-day that the railroads should adopt a specific coupler, in this transition state, while some of the cars are equipped with one coupler and others with another, will it not naturally increase the casualties on the road?

Mr. KING. I think it would commence to decrease immediately. I will tell you why. Here is the Illinois Central; there are forty or fifty roads that I might speak of which are refusing to put on any automatic coupler at all. They are using the old link and pin. Of course these other cars come to them equipped with the different variety of automatic couplers. As soon as this question would be settled and it was determined what particular type should be adopted, all the railroad companies in the United States and all the car manufactories would begin to equip their cars with that coupler, and in less than one year the change would be very marked; because it is the testimony of the railroad employes and managers that the trouble comes from the great variety of couplers, because they do not know what is coming. All these varieties will immediately commence to disappear, and we would have one particular type. I think the others would commence to disappear right away.

I have talked with these men and they all agree that it would practically reduce it down, some say 80 and some say 90 per cent, if we had one particular kind of coupler. I want to say that there is a large number of couplers not upon any cars that I believe to be just as good

as any that have been put upon cars. By reason of poverty the men who have invented them have not been able to get a fair test. The commission which is provided for in my bill, if appointed, could have practical tests made. They would very soon begin to winnow them out. They could take this type or that. They could make tests upon a half a dozen of the best types, and when the tests were made and they finally selected one particular kind of coupler, then you would see all the railroads of the United States adopt it with alacrity. They would say, "We are not contending with the Atchison or the Pennsylvania, but with the action of Congress, with a law," and they would abide by it with all grace and speed.

I present to you the bill which is the result of my careful investigation. It is only good for what it is worth. It is in favor of no man's coupler and in favor of no line. We want to get this question solved. Railroad men can not solve it. You can not get a railroad man to tell you that he wants the Congress of the United States to pass a law to solve it. The railroads can not solve it. As Mr. Baldwin says, the large moneyed interest which certain railroad men have in particular types of couplers will prejudice the selection of a coupler when voted upon by the various railroads in interest, and that the result aimed at, the safest appliance for protecting the lives of railroad employes, may not be reached on that account. That is the milk in the cocoanut of this whole matter.

My bill is numbered 6187. I had Maj. Pickler, of South Dakota, introduce it. It is just exactly like Senator Cullom's bill in all of its details except the first three sections. It provides for a commission of seven, and the Congress of the United States can well afford to be lavish in an appropriation of money for taking up this matter and disposing of it and getting some head to it, and the only way I can see is for some disinterested, high-minded commission to have the authority to act and who will report their findings to Congress, if it is not settled by the approval of the Interstate Commerce Commission.

Senator BARBOUR. I understand the gentleman to say that the railroad managers are interested in couplers?

Mr. KING. Yes.

Senator BARBOUR. I think a sweeping charge of that sort ought to be more specific. So far as the Southern railroad managers are concerned I am satisfied it is not so.

Mr. KING. The Senator was not present, I think, when I made the proper preface to that.

Senator BARBOUR. I do not believe that the Baltimore and Ohio people are connected with any coupler.

Mr. KING. I only get this from the testimony of railroad men. They tell me that railroad managers are interested in particular couplers.

Senator HARRIS. You mean in patents?

Mr. KING. Yes.

Senator HARRIS. I understood your allusion to be that the railroads had money already invested in particular couplers which were on their cars.

Mr. KING. That is the main thing. A line has adopted a particular coupler and they have got their money invested in that particular coupler, and, of course, they do not want to throw their money away.

Senator BARBOUR. I do not see how any railroad managers could properly be interested in any patent or any device they may be using on their lines.

Mr. KING. The only reason I have for thinking so is the testimony of railroad men.

Senator BARBOUR. I know the Janney coupler, one of the leading ones, is owned by outside parties, and they had hard work to get it introduced.

The CHAIRMAN. What is your business now?

Mr. KING. I have been a railroad commissioner of South Dakota for a number of years and occupied that position when I was placed upon this committee by the railway commissioners' convention. I have been associated with Mr. Crocker, of Massachusetts, in connection with the investigation of this question. I have no interest in any corporation, person, or thing in any way, directly or indirectly. I am a lawyer by profession. I am, at present, in the Treasury Department of the United States.

Senator WOLCOTT. As a clerk?

Mr. KING. As chief of division.

Mr. COFFIN. How long were you a commissioner?

Mr. KING. Three years. I asked to be relieved from service on this committee, but Mr. Crocker insisted that I should remain. I resigned my position as a railroad commissioner.

STATEMENT OF L. S. COFFIN.

Mr. COFFIN. Mr. Chairman and gentlemen of the committee, I stand before you feeling a good deal embarrassed and still a great responsibility, as the letter that I handed the chairman informs him of the position I occupy.

The CHAIRMAN. I will read a part of the letter to which Mr. Coffin refers:

I have to-day caused to be forwarded to Hon. L. S. Coffin, of Iowa, who is representing our organization at Washington a supply of annual reports and other printed matter, with the request that the same be distributed among the members of your committee.

That is from Mr. W. A. Sheahan, grand secretary and treasurer of the Brotherhood of Railroad Trainmen. I read this clause of the letter to show Mr. Coffin's relation to the subject.

Mr. COFFIN. Mr. Chairman, I do not stand here to urge you to do your duty. You are just as ready to do your duty as I or anybody else. What you want of me is all the information you can get out of me, and I stand here to give you everything that I possibly can that will help you in this matter. I have had some opportunities to gain information in this matter, and I will just say that I was for five years one of the railroad commissioners of Iowa. I became early interested in the matter of safety to these men, and I put myself in the way to find out everything that possibly could be found out in regard to the matter. I have been present at every brake test made in America since 1883 and at nearly every coupler test that has been made.

I want to lay some facts before you that have not been placed before you at all, and it is surprising that some of the railroad companies have not laid these facts before you. In the first place let me say there is a demand for this legislation. I took up the World, printed in New York, yesterday, and I found there an editorial in regard to a coupler job before Congress, and saying that the attempt to get legislation was a coupler job to enrich a lot of coupler folks. Let me just show the perfect lack of foundation for anything of the kind. There are in this nation now twenty-

eight States that have the system of railroad commissions. Those States unanimously in the conference of the railroad commissioners asked Congress to act on the matter. Besides these some of the States that have not the railroad-commission law have voluntarily passed resolutions, sending them to Congress, asking Congress to act. Here is a large majority of all the States and they have asked Congress to enact legislation on this matter. There can not be any job about that. You can not think of that thing.

Here is another point. There is at this time, and it is a most opportune thing, too, an inevitable necessity before the railroads of the United States. What is it? It is that there has got to be a change in all their drawbars, aside from the question before us. They have got to do that. Why? You and I all know that the freight car of to-day is of about three times the capacity as compared with what it was ten years ago, when it was 10 tons; now it is 30. We all know, too, that the weight of an engine is something like two or three times what it was ten years ago. Hence the strength of the connecting device between the trains must be increased, and the everlasting breaking of the link and pin is causing wrecks and loss of life. You say, can they not increase the strength and the size of the links? No, they can not do it. Suppose the Baltimore and Ohio should go to work and say they will do that. In order to make their pins larger they have to have a drawbar with a larger hole. They have got to have a drawbar with a larger mouth for the link to enter, and all other roads have to do that or else the cars are not interchangeable. They have a standard link and pin all over this nation, and you go on any freight train you please and go into the caboose and you will find there hundreds of pounds of links and pins to meet emergencies. They are all exactly alike; they are standard; they are not strong enough to meet the exigency of the service at this time. Hence there is going to be, there must be inevitably, an entire change of drawbar on all the freight cars in this nation. Every railroad man will say that I am right in regard to that. Trains breaking in two is very expensive and very dangerous.

Allow me to point to a very recent object lesson. The public are not aware of it. The whole country was shocked at the terrible accident on the New York Central Christmas eve. The public have no idea of what was the original point to that accident where so many lives were lost. I will tell you. A freight train was on that track, and in starting up to get away from the coming passenger train it broke in two, because of a link-and-pin coupler. That delayed the first passenger train, into which the second passenger train ran with such terrible results. The breaking of the freight train in the first instance, you will see, caused the wreck. I went to Mr. Toucey. I came on to New York to find out what kind of coupler was used. I asked him. He said, "I had not thought of that; it is a very important point." He called a man in, one of the superintendents, and asked him. He did not know. He ordered him to get the information, so that when I called the next morning I could have it.

Let me say right here, while I am speaking of Mr. Toucey, that he said to me, as I left his office:

Mr. Coffin, if you can get legislation through Congress on this matter, do not make it over five years for all the cars to be equipped with safety couplers in this nation. We can do it in that time. We want to do it and we want to have it done.

The CHAIRMAN. What is his relation to the New York Central Railroad?

Mr. COFFIN. He is general manager of the New York Central. The

railroads themselves have been making great effort to meet this difficulty and this demand.

I am surprised, Mr. Chairman and gentlemen of the committee, at the statements made here by the gentleman who preceded me. I want, in order to throw some light upon the question that he has brought up and the assertions he has made, to have you go with me briefly and slowly up to the point we are now, of the efforts of the railroads themselves to get a uniform standard coupler. Mr. King said that you can not get the railroads to agree. I have the reports here of the Master Car-Builders Association from 1887 up to their last convention, that of 1891, held at Cape May in June last. I want to say that each member of that association has his name here [indicating in book], the road he represents, the number of cars he represents, and from this statement [indicating] it will be seen that the number of cars represented in that association at their last meeting was 991,564—practically a million cars. You all know that that about takes in all the cars there are in this nation. You take the reports and go clear back. Here is the report of 1887, when the Master Car-Builders National Association met at Minneapolis, Minn. There they adopted the report of a committee on safety appliances, and especially on couplers.

The CHAIRMAN. How is this association composed?

Mr. COFFIN. It is composed of such men as Mr. Ely, who was before you. Then there is the Master Mechanics' Association and the Master Car-Builders' Association, and very often the master mechanic is a member of the car-builders' association and *vice versa*. It is made up of these master car-builders and master mechanics.

The CHAIRMAN. Of all the roads?

Mr. COFFIN. Of all the roads. There is never less than 90 per cent represented. They are sent there by the railroad managers. It is an absolute necessity to have that association. They meet together to decide upon standards of everything connected with the making of an engine or the making of a car.

Senator WOLCOTT. Does it include car-builders who are not officials of railroads?

Mr. COFFIN. It takes in some, but only those representing cars have a right to vote.

I say it was an absolute necessity to have that association, when these little roads, all over the nation, some twenty or thirty years ago, began to combine to make through lines so that cars went all over. Then it was found to be absolutely necessary to have the men who had charge of the repairing of the cars make arrangements for the repairing of the cars, as they would be all over the nation, so that if a car belonging in Portland, Me., is found in Portland, Oregon, with a broken axle-tree it is taken in the shop there and they have an axle tree just exactly like it. It is a standard. They have decided upon it, and that axle-tree can be put into the wheels and the car sent home. You see at once how it works.

These master car-builders (I wish you had time to examine the plates showing the exact size and dimensions) are carefully doing this. If you could look at the plates you would see how careful they are and how important it is that they should be so. The railroads send these men there; they pay their expenses; they take them two weeks away from their work and send them to this convention for the very purpose. At the Minneapolis convention five years ago, after years of experimenting and tests, and I attended some of these tests of couplers, a report was made and the association adapted that report by a two-thirds vote,

and that has to be so. After that, as I said before you two years ago, that does not fix it. The action of the master car-builders has to be sent to all the managements of the roads represented in that association and if, after ninety days of consideration, they, by a letter ballot, approve of the action of the master car-builders in that particular thing by a two-thirds vote that particular thing becomes a standard for all the roads of the nation.

Now, that took place in the fall of that year. The letter ballots were returned to the secretary of that association, and there were fourteen more than a two-thirds vote.

Senator GORMAN. You mean to say that they agreed upon a particular coupler?

Mr. COFFIN. A certain type; no one particular coupler. That type was named the Janney type. After the return of the letter ballots, so that the master car-builders knew what to do, by order of their managements the executive committee was instructed to get a coupler of this kind, look it over, test it, and examine it, and change its lines, if it need be, and then publish to the world the contour lines and the size and shape of that coupler as the standard coupler of the railroads of this nation.

They did that. They found in their investigations that there were certain patents upon the contour lines of the coupler that they had chosen, and they could not go any farther unless the patentees would surrender those claims to the association, which was done, and they were surrendered to the railroads of this nation.

Mr. KING. You are in favor of legislation specifying the master car-builders' type?

Mr. COFFIN. I favor legislation that shall put into use what the great majority of the railroads have adopted.

Mr. KING. That, you say, is the master car-builders' type?

The CHAIRMAN. Mr. Coffin had better be allowed to conclude his statement.

Mr. COFFIN. I want to explain to you—I must go right to that point—the wonderful anomaly that has come up before you, what Mr. King has said, that the master car-builders' couplers will not couple with each other, and that the railroad boys do not want them; that they would rather have the link and pin. That is all very natural, as you will see it. I want to say before I come to that in all these reports of the Master Car-Builders' Association and conventions there is not a single attempt to do away with that standard, but to make it still stronger and stronger every time.

Now, as to the adoption of this standard—remember, it is a type, not a particular coupler—the makers in making these couplers, some of them, having ideas of their own, changed the patterns a little and the patterns would become a little changed in moulding, and by and by it was found that sometimes two of these same couplers would not couple together.

The CHAIRMAN. With each other?

Mr. COFFIN. Yes, sir; with each other. That came up for discussion in their convention, and in 1890 a committee was appointed whose business it was to examine into this matter. One of the committee lived at Buffalo. This committee was authorized to send out to every manufacturer of master car-builders' couplers and have him send a coupler and a drawing of his coupler to the chairman of this committee in Buffalo and then the committee would examine all of them. Here is the drawing of the master car-builders' coupler [exhibiting]. They

would apply these specifications to all these couplers and see how much they differed and see where the difference was. There were 18 couplers sent to them. Let me set you right in regard to the wonderfully wild assertions which have been made before the committee that there are several hundred of the master car-builders' couplers, all alike. There were but 18 manufacturers of the couplers of the master car-builders' type who had couplers they could send there. There were 6 or 7 others who sent specifications and drawings of a coupler they had in embryo. This committee applied the test. It would be interesting to see how they varied from the standard contour lines, if the committee had time to go into the matter.

This committee reported to the convention of 1891 at Cape May the variations there were and showing why the couplers would not couple. The committee was then instructed to get templates and gauges and furnish them to every manufacturer of the master car-builders' type of coupler and to the railroads, so that they could apply them to every coupler that came to them for sale. A firm in Connecticut, some of you may be acquainted with it, the Pratt & Whitney Company, of Hartford, who are manufacturers of very fine work, were employed to make these templates, the gauge to be made of the hardest kind of tool steel. The manufacturers of this type of coupler were furnished with these gauges and the railroads were also, so that now there may be twenty or thirty of the master car-builders' couplers manufactured, and every one of them, in the hooking point, is exactly alike, and every one will couple under every conceivable circumstance in railroad service. I was surprised to hear some of the statements. They were made because the gentlemen do not know these things. Here [exhibiting] is the circular sent out by the committee giving the form of gauges and showing where they can get them. That was sent to every master car-builder.

Senator WOLCOTT. Let me ask you a question. If it is a fact that the master car-builders' type has been adopted by the railroads, and that they are finally getting to work on the proper basis, what is the need of legislation?

Mr. COFFIN. I will come to that.

Senator WOLCOTT. Let us get to that. That, I suppose, is what we want to hear.

Mr. COFFIN. I do not want to omit anything that you may want to have before you.

If you will allow me to delay answering that a little I want to refer to the wonderful pains they have taken to arrive at this thing properly. In 1885 they advertised to the world that their committee would be at Buffalo to test couplers, and asked all parties who had a coupler that they thought would meet the emergency to come there with two cars equipped with them. I was there, and for two days the experts handled the cars. There were some fifty-odd couplers. A great many more sent models that they would not examine. Then, after the two days of tests, the committee retired to a room and invited some of us to come in and hear the discussion on the tests. The fifty couplers were cut down to twelve. Those twelve were recommended to be continued for trial, this road agreeing to take fifty couplers and put them on their cars and use them and keep an accurate account of their service and how they worked, and another company agreeing to take fifty of another style.

Then, at their next convention these were reported upon, and they were cut down still more. At their next convention at Minneapolis, in

1887, they were all cut down to one type of coupler; not one coupler, but one type.

I dwell on this for the purpose of showing to you that if you create a commission it has got a long job before it. These men, with all the facilities that they had, and which no commission can have, have been for years arriving at what they have now come to, and have got a practical thing, so they think—and who has a better right to think that they have than they themselves—and they are sustained by their roads.

Senator HARRIS. Without going into the details as to how the railroads have arrived at the conclusion, is it a fact that the great majority of the railroad companies of this country have agreed upon a type of coupler?

The CHAIRMAN. A specific device.

Mr. COFFIN. Yes, sir; a type.

Senator HARRIS. Is it a fact that each specific device belonging to that type will couple and uncouple with another of the same type?

Mr. COFFIN. Yes, sir.

Senator HARRIS. Is it a fact that the great majority of the railroad companies recommend the adoption of that type of coupler?

Mr. COFFIN. Yes, sir.

Senator HARRIS. Is it a fact that the roads are proceeding with reasonable expedition to adopt the coupler of that type?

Mr. COFFIN. The majority of the roads are; not a very large majority, but a majority.

Senator HARRIS. I would be glad to know, then, if there is any necessity for legislation on this subject, and why?

Mr. COFFIN. There are certain roads, as Mr. King said, that will not do this thing unless they are compelled to by law. Take the Gould roads. They will not do a thing until the law compels them to do so.

The CHAIRMAN. What proportion are the Gould roads to the entire mileage of the country?

Mr. COFFIN. They are a small minority.

The CHAIRMAN. Are there any others who would refuse to put on the couplers until compelled to do so by legislation?

Mr. COFFIN. There may be some few. I want to explain to you about the Sault Ste. Marie road. That road has an immense amount of Canadian traffic. It has to take the Canadian cars, which are equipped with the old link-and-pin couplers. Now you see why they do not adopt the master car-builders' coupler.

Senator GORMAN. Does a patent cover any portion of the master car-builders' coupler?

Mr. COFFIN. Yes, sir; some portion of it. It is now so common, however, that it is just a matter of manufacture and sale, as with any other thing. As Mr. Ely said the other day, it is just like the manufacture of a hoe; the patents do not cut any figure in it whatever.

There are some roads that will not do anything. Pardon me if I say this, but roads that are more for Wall street than for actual work among the nation will not do anything.

Senator WOLCOTT. What do you mean by that?

Mr. COFFIN. Roads for speculation.

Senator WOLCOTT. Are not all railroads carriers.

Mr. COFFIN. Yes, sir.

Senator WOLCOTT. What do you mean by railroads being for Wall street and not for the people? I wish you would designate them.

Mr. COFFIN. I suppose it is a matter of common intelligence.

Senator WOLCOTT. I have not enough common intelligence to know

what railroads are for Wall street and what railroads are carriers for the people.

Mr. COFFIN. Probably it would not be best for me to specify them. We have those things in our minds, I think. Mr. King has spoken of the interest managers have in these couplers.

The CHAIRMAN. You have not quite answered the question of Senator Wolcott or of Senator Harris on the question of the necessity for legislation.

Senator HARRIS. Is legislation necessary; and if so, exactly what legislation?

Senator WOLCOTT. Why?

Senator HARRIS. And why.

Mr. COFFIN. To my mind legislation certainly is absolutely necessary to reinforce (perhaps that is the word I want to use) the majority of the roads that are trying to get a uniform coupler all over this nation for the safety of their men. That is what we want. There are some roads that will not do anything, that are not doing anything. We know that a great majority of the roads are doing something. Mr. Haines said right here that his association, representing 122,000 out of 170,000 miles of road, have adopted it as a settled policy to put the master car-builders' type of coupler on every new car and every repaired car, and on all others as fast as they can. Here is a large majority of the roads doing this very thing. But the others can not. They do not. I can not tell why.

The CHAIRMAN. What progress is made from year to year?

Mr. COFFIN. During the last year there has been a wonderful progress, as Mr. Haines showed you by the diagram. It runs up very rapidly. There has been in the last year a larger number adopted than in any two or three years before.

Senator JONES. During the last year have any roads which have not heretofore used that coupler adopted the master car-builders' type?

Mr. COFFIN. I am not prepared to name the particular roads, but I have been told that there are some who have.

Senator JONES. Then is it likely that in the coming year there will be other roads who have not done it heretofore who will adopt these couplers?

Mr. COFFIN. I have no doubt of it.

Senator WOLCOTT. Do you appear on behalf of the majority of the railroad companies asking that the minority be coerced into doing this? Do you understand that the railroads representing a majority of the total mileage of the country are in favor of some legislation that will compel the minority to do what they, the majority, are already doing?

Mr. COFFIN. I am not here in the interest of the railroads *per se* at all. I am here in the interest of the employes.

Senator WOLCOTT. Do you understand that the majority of the railroads desire the minority to be coerced into doing this?

Mr. COFFIN. They do not want any compulsory legislation.

Senator WOLCOTT. The majority do not need it because they are already putting on the couplers?

Mr. COFFIN. Yes, sir. If we had all such roads we would not want any legislation. Mr. Haines thinks that the moral effect on the other roads will bring them into line. It has not brought them in yet. He says that by refusing to take cars that are not equipped with automatic couplers they will be compelled to come in. In your investigation only a few years ago you did not find a single instance where the general managers kept their agreements in regard to pools. Now, suppose you

take the Standard Oil Company, which has not a single automatic coupler on any of its tank cars. Suppose the Standard Oil Company says to the Baltimore and Ohio, or the Pennsylvania, "You must take our cars or we will go to the Michigan Central." There has got to be a good deal of backbone on the part of the managers to refuse to take that traffic. It can not be done. Competition will upset any of these agreements, and it is only by the stern say-so of the law that these men will ever be brought into line. Mr. Rockefeller is a grand man, yet I do not see any sign of his equipping his cars with automatic couplers.

I am not talking at random. Two years ago I prepared a bill and presented it and secured legislation in Iowa. It was passed in the senate without a single dissenting vote. In the house there were two or three. I have a letter from Mr. Ives, president and general manager of the Cedar Rapids and Northern Railroad, having some thousand miles, in which he says that they are equipping their cars according to law, and at the end of his letter he says:

I do hope, Mr. Coffin, as we have started in on this line, that you can get national legislation to bring all the roads into line.

That is his letter. I have it here now.

The CHAIRMAN. What kind of a coupler does he put on his cars?

Mr. COFFIN. The master car-builders' type. He has two or three different kinds, and he says he sees no trouble at all, that they operate nicely.

Now, again, let me tell you what Mr. Whitman, the general manager of the Chicago and Northwestern, said to me the other day as I came through Chicago. I think he said that on the Lake Superior line, which was equipped with that kind of coupler, "we run solid trains equipped with master car-builders' type of coupler and absolutely"—he brought his fist down on the table—"and absolutely there are no breakages at all, and no injuries at all where they run solid together."

Senator GORMAN. If that is so is it not sufficient inducement for the other railroad companies to adopt it?

Mr. COFFIN. I should think so. Let me explain one thing right here, Mr. Senator. The managers may be all right, the superintendents may be all right, and probably they would like to equip their cars with these safety appliances, but the owners of these roads have to vote, through their directors, and the ownership probably is absenteeism, across the water, where you can not reach them all the time. The managers may go to these boards in vain, and unless there is a law they can not get the appropriations to put on the appliances. That is one of the necessities for the law. If it were all home work there would be no trouble, I think.

Senator GORMAN. Is not the whole thing an experiment up to the present time?

Mr. COFFIN. It is now beyond the experimental stage.

The CHAIRMAN. As to the proper coupler?

Senator GORMAN. As to the proper coupler. Here is the Baltimore and Ohio with a dozen different couplers. It insures all of its employes. It is a home road. It is owned by the people right around there—

Senator BARBOUR. Do they not get the insurance fund out of the employes?

Mr. COFFIN. The Baltimore and Ohio is equipping every new car with this same type of coupler just as fast as they can, and every repaired car is being equipped with them. Mr. Geives, I think that is

his name, is the master car-builder, and he has been ont his committee to urge the Master Car-Builders' Association to adopt this coupler. I am very well acquainted with him.

Senator GORMAN. All the new cars are to be equipped with these couplers?

Mr. COFFIN. The new cars and the old cars, as fast as they can get the means to do it. It makes no difference whether it is the Hinson or the Gould, or the Janney.

Now let me give you another instance. On the Chicago, Burlington and Quincy road in 1887, there was a gravel train equipped with some twenty or more cars of the master car-builders' couplers, and eight or ten with the old Porter drawbar, the strongest link-and-pin coupler there is. That gravel train has made a mileage of over four times round the world, and there has not been a single breakage in the master car-builders' coupler.

I bring this up to show to you gentlemen that you can not make a mistake in legislating in the direction in which the great majority of the railroads have gone and gone so carefully.

The CHAIRMAN. What kind of legislation do you want?

Mr. COFFIN. If you will pardon the egotism that Mr. King referred to, I will read to you one or two sections of a bill that I have prepared and had introduced in the House. It would have been introduced in the Senate, but Senator Allison introduced the bill which was introduced at the last session instead of this one, which I submit to the committee with the amendments I wish made in it:

The bill is as follows:

A BILL providing for a uniform system of coupling cars and controlling railroads trains, for the greater safety of railway employees.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That from and after the passage of this act it shall be unlawful for any person, company, or corporation operating a railroad in this nation to put into use any new locomotive for the purposes of interstate commerce that is not equipped with a proper power brake.

SEC. 2. That on after twenty-four months from the passage of this act it shall be unlawful for any person, company, or corporation engaged in the movement of cars on any railroad to facilitate interstate commerce to use any locomotive engine to move such cars that is not equipped with a suitable power brake, or with what is commonly known as a "driver brake."

SEC. 3. That no person, company, or corporation can lawfully, after the passage of this act, put any new car, or car that has been to the shops for general repairs, or which has to have one or both of its drawbars replaced by another, into use on any railroad for the movement of interstate commerce which is not equipped with suitable safety couplers.

SEC. 4. That it shall be unlawful for any person, company, or corporation in the United States which may be engaged in interstate commerce to use any car in the movement of such commerce after January, eighteen hundred and ninety-seven, that is not equipped with proper safety couplers.

SEC. 5. That it shall be unlawful for any person, company, or corporation that is now or may hereafter be engaged in the movement of interstate commerce to run any train of cars in such work after January first, eighteen hundred and ninety-five, that has not a sufficient number of cars in such a train so equipped with power or train brakes that the engineer on the locomotive drawing such train can control the speed of the train without requiring brakemen to use the common hand brake for that purpose.

SEC. 6. That the main design of this law being this, namely, greater safety to employees in handling cars and running trains which may be engaged in moving interstate commerce, it requires all persons, companies, or corporations owning or using such cars and trains to adopt a uniform system of coupling and uncoupling such cars, and it enforces upon all such parties engaged in interstate commerce the universal use on all their cars of the standard type of safety couplers as established by the majority of such persons, companies, and corporations, through the American Railway Association, the National Railway Master Car-Builders' Association, the

Railway Master Mechanics' Association, or any other representative association of railway officials representing the majority of the mileage and a majority of the freight cars of the railroads of this nation, as shown by the published reports and records of the regular conventions of any one or all of these associations, now extant or that may hereafter be published by them. And the so-called safety couplers mentioned in this act must be uniform in their action so as to be interchangeable upon all the cars on any railroad engaged in the interstate commerce, and they must be such as will not require the men to stand between the ends of the cars when the act of coupling is done, or require them to go between the cars to uncouple them when in a normal condition. And the intent, meaning, and design of section five of this act is to require that all freight trains engaged in interstate commerce shall be so equipped with power or train brakes which can be manipulated by the engineer drawing such train, so that he can control such train with the same safety to the freight-train men as passenger trains are now controlled by the engineer drawing them with safety to passenger-train men, as far as the manipulation of brakes is concerned.

SEC. 7. That when any person, company, or corporation engaged in the movement of interstate commerce by railroad shall have equipped 50 per cent of its cars with said couplers, a sufficient number of cars with power brakes so as to meet the requirements of this law, it may lawfully refuse to receive from connecting lines of roads any cars that are not equipped with such safety couplers and power or train brakes as will work and readily intercouple with the couplers and brakes in use on its own cars, as required by the provisions of this act.

SEC. 8. That any person, company, or corporation engaged in interstate commerce using any locomotive, car, or trains contrary to the provisions of this act shall be held prima facie guilty of gross carelessness, and shall be absolutely liable for all injuries to their employees, or other persons, that may result from handling or working with such locomotive, car, or train, being in use contrary to the provisions of this act.

SEC. 9. That any employé of any person, company, or corporation engaged in interstate commerce who may be injured by any locomotive, car, or train in use contrary to the provisions of this act shall not be deemed guilty of contributory negligence although continuing in the employ of such person, company, or corporation after the habitual unlawful use of such a locomotive, car, or train had been brought to his knowledge.

SEC. 10. That any person, company, or corporation using any locomotive, car, or train in interstate commerce contrary to the provisions of this act shall be deemed guilty of misdemeanor and liable to a fine of five hundred dollars for each and every offense, collectible in any district of a United States court where the offense may have been committed.

SEC. 11. That every person, company, and corporation engaged in interstate commerce by railroad shall include in their annual report to the Interstate Commerce Commissioners the number of freight cars owned and controlled or leased by them, the number equipped with safety couplers, and the name and make of the couplers used, the number of freight cars equipped with power or train brakes and the name and make of such brake, and also the number of locomotives owned and used and the number equipped with driver brakes. And the said Interstate Commerce Commission is hereby authorized, if found necessary after a full investigation, to extend the time for the full equipment of the rolling stock of any road affected by the provisions of this bill to such a date as it may in its judgment deem the exigencies of the circumstances and condition of the road in question may require, due regard to the rights and safety of employees always being had.

MR. COFFIN. Now, all I ask is legislation that will help on and reënforce the roads in their selection of a coupler that is practical and is doing the work, and is being put on already very rapidly. The coupler that the master car-builders have adopted will be so perfected in its details that there will not be a single one of that type that will not couple and uncouple always under all circumstances.

SENATOR WOLCOTT. Some of the roads, in good faith, are, as rapidly as their business and finances will permit, changing to a standard coupler. Now, do you understand that they want the other roads coerced? These roads, as far as I am informed, are not here demanding legislation. How do you account for it, if the majority are going ahead and doing the best they can? You cited the Baltimore and Ohio and the Chicago, Burlington and Quincy—

MR. COFFIN. In my private conversation with Mr. Haines, the presi-

dent of the American Railway Association, and also vice-president of the Plant system in the South—

Senator WOLCOTT. Is that a Wall-street concern?

Mr. COFFIN. I do not know.

Senator BARBOUR. I guess they are all in Wall street.

Mr. COFFIN. He said, "We do not want to be placed in a position of asking Congress to pass compulsory legislation." You know and we all know that they resist all kinds of legislation in regard to their own matters, but if you take up the testimony and talk of Col. Haines before the committee, it seems to me that you can read between the lines all along that he is almost asking you to help him by passing such a law.

Senator HARRIS. In view of the fact that the common carrier is required at common law to use the best safety appliances, failing to do which he is guilty of negligence, which would make him liable for all damages that occurred by reason of that failure, is it not probable that every carrier will have the best safety appliances as fast as he reasonably can?

Mr. COFFIN. It would seem so.

Senator HARRIS. Are they not doing so?

Mr. COFFIN. As a matter of fact, they are not doing so.

Senator HARRIS. Is it not a fact that they have, within the last year, adopted a vastly larger proportion than ever before; is it not a fact that they are now, up to the last date you have information, adopting them with the rapidity that characterized the proceedings of last year?

Mr. COFFIN. Let me answer that in this way: Our legislature, two years ago, passed a law that all roads running through Iowa must put on these couplers. Nebraska copied our law and passed it last year. New York has a law similar to that. These laws are having the effect of driving the roads to put on these appliances. This legislation will go on if Congress does not act. The States will act, and the danger is that we shall get a conflict and a multiplicity and have the same trouble we are having now. Congress is the only power that can act.

Senator JONES. In addition to what you say about the States, I understood you to say that an association representing 122,000 out of 170,000 miles of railroad have agreed to adopt this type of coupler, and are already putting them on?

Mr. COFFIN. That is what Mr. Haines stated before the committee.

Senator JONES. And you say that railroads began to use that coupler last year who had not used it before?

Mr. COFFIN. Yes, sir.

Senator JONES. And you also stated that other roads, you think, will do the same thing in the future?

Mr. COFFIN. Yes, sir.

Senator JONES. And continue the thing that way?

Mr. COFFIN. Yes, sir. It delays the thing. Too much stress can not be put on the necessity of having this transition period as short as possible. The secretary of the Trainmen's Association sent to the chairman the report for the last year, and I wish you would just look at that and see line after line where it says "Killed coupling cars," "Killed coupling cars," and you look further and see where the \$1,000 for total disability went. You will find that the majority are young, unmarried men.

The CHAIRMAN. Who pays this money?

Mr. COFFIN. The boys themselves.

Senator HIGGINS: It is an insurance fund?

Mr. COFFIN. Yes, sir; they do it among themselves.

The CHAIRMAN. It does not come out of the corporation?

Mr. COFFIN. No, sir.

Senator WOLCOTT. You know it is a fact that some of the railroads contribute their share?

Mr. COFFIN. Yes, sir. The Chicago, Burlington and Quincy and the Baltimore and Ohio have insurance companies.

Senator HIGGINS. The Pennsylvania and the Baltimore and Ohio Railroads require their employes to pay into the treasury a certain proportion of their salary?

Mr. COFFIN. Yes, sir.

Senator GORMAN. The company furnishes part of it.

Mr. COFFIN. Yes, sir; but the most of it comes from the boys themselves. There is no question if we can get legislation requiring all the roads to adopt a uniform coupler nine-tenths of this will be done away with.

Senator HIGGINS. Is it not true that the Baltimore and Ohio or the Pennsylvania in exacting of their employes membership in these associations also requires them to sign a contract that they will not sue the company for damages?

Mr. COFFIN. Yes, sir; that is the fact.

Senator WOLCOTT. Do you not know that that has been declared unconstitutional in most of the States?

Mr. COFFIN. Mr. Chairman, I would like to take up a few moments of your time in a discussion of the air-brake question.

The CHAIRMAN. Mr. Stahlman is here and is anxious to leave the city, and we will hear him now.

STATEMENT OF E. B. STAHLMAN.

The CHAIRMAN. Please state your relation to the railroads.

Mr. STAHLMAN. I am a commissioner of the Southern Railway and Steamship Association. Headquarters in Atlanta, Ga. My home is in Nashville.

Mr. Chairman and gentlemen of the committee, I shall be very brief in what I have to say. I have read the arguments presented on this question, as far as I have been able, since I was before the committee on Wednesday last, and there is one thing which has impressed itself upon my mind, and has doubtless found a lodgment in your minds, and that is that of all who have appeared before you desiring legislation scarcely any two agree.

The CHAIRMAN. As to the specific kind of legislation desired?

Mr. STAHLMAN. Yes, sir; as to the specific legislation.

The CHAIRMAN. All of them agree that something ought to be done?

Mr. STAHLMAN. Yes; all of them agree that something ought to be done. None of the gentlemen however who have appeared before you, who, from their own statements, have given the matter much thought and serious consideration, have agreed or do agree as to what ought to be done. About the only practical thing suggested by any man or body of men, as far as I can see, has been by the Association of Master Car-Builders. They agreed among themselves several years ago that something ought to be done, and they took steps to do it. They designated a certain type of coupler. The roads in the main agreed to adopt that style of coupler. That type of coupler is being put on the cars

of the different railroads in this country about as fast as anyone, under the circumstances, could expect it to be done.

In the first instance it may be assumed that when the Master Car-Builders' Association first recommended a particular type of coupler there was still some doubt in the minds of this body of mechanics as to the utility of that coupler, and hence for the first year or two the process of putting on the coupler was very slow. We find upon investigation that during the first year after the adoption of that coupler there were but a few put on. The test having been made that year to the satisfaction of a number of the railroads, more were put on the next year. The test having been more satisfactory to a larger number of roads, a larger number were put on the next year, so that now we have reached the point where we are pretty well satisfied that the type of coupler recommended will answer, and it is reasonable to assume, in view of what has been done, that much better results will follow and much more will be done hereafter.

The appointment of a commission to determine what ought to be done has been suggested. Suppose you appoint a commission? It will require a year or two at least for a commission under the plans proposed by some of these gentlemen to reach a conclusion as to what ought to be done. It will then require perhaps six months or a year for the Interstate Commerce Commission to determine whether or not that is the best thing to be done, and then if the Interstate Commission should conclude that it is not the best thing to be done it is to come back to Congress to settle in some other way, and all this time the work now going on, of putting on the master car-builders' type of coupler, which seem to answer every purpose, will be stopped.

The CHAIRMAN. I should think you would have them all on by this time?

Mr. STAHLMAN. The chances are, if let alone, that the entire work will be finished before that time.

Mr. Coffin, who seems to be an advocate of the master car-builders' type of coupler, insists that Congress shall fix a time in which to conclude this work. That suggestion upon its face does not seem unreasonable, yet in doing this Congress may go a long way toward assuming a responsibility for the Government which ought not to be assumed. Suppose Congress should say to the railroads that the work of putting on this type of coupler shall be completed within two, three, or five years, and the railroads, in accordance with the requirements, go forward, and after the work has been completed injury to life and limb continues, will not the railway companies be relieved of liability? Can Congress say to the railroads of the country you must do thus and so, and if done still make them liable for the injury inflicted by a compliance with the requirements? It seems to me we are treading on dangerous ground. At common law and under the several State statutes railway companies are required to adopt the best and safest appliances in conducting their business. Is it wise to relieve them, even by implication, of this responsibility?

I think I can plainly see why the makers or patentees of couplers of the master car-builders' type prefer to have Congress compel the railroads to adopt and complete the work of putting on that type of coupler within a few years. They know if Congress can be induced to take this step all other forms of couplers, even though an improvement on the master car-builders' type should be discovered, will be shut out.

Speaking for the section I represent, I think the reports of disaster to trainmen have been very greatly exaggerated. I speak now of the rail-

roads south of the Potomac and Ohio and east of the lower Mississippi rivers.

Senator GORMAN. What is the mileage?

Mr. STAHLMAN. About 25,000 miles, according to the report I have in my hand. The roads that I represent are embraced in groups four and five.

It is safe to assume that the railroads of the country do not want to kill people. They want to preserve life, and they are especially desirous of preserving the lives of those employed by them. If they can minimize the risk of operating their railroads they can reduce the expenses of operation. The brakeman who brakes upon the train, now receiving from \$2 to \$2.50 per day, would if engaged upon a farm receive less than \$1 per day. It is the risk largely which calls for the increased rate of wages. We have men working on the tracks for \$1 per day, and men in other branches of the service where there is practically no risk assumed who receive only \$1, who work just as hard and just as diligently as brakemen on the trains. They are not paid so well for the reason that the risk is not so great.

One would suppose from what has been said on the subject that the railroads were murdering people at a terrible rate. I have looked into this subject, and it is not near so great as you may have been led to believe. On the 25,000 miles of road in my section 39 were killed.

Senator GORMAN. In what time?

The CHAIRMAN. During what period?

Mr. STAHLMAN. During the entire year.

Senator CHANDLER. By coupling?

Mr. STAHLMAN. Yes, sir.

Senator GORMAN. What are you reading from?

Mr. STAHLMAN. From the last report of the Interstate Commerce Commission.

Senator HIGGINS. That is equivalent to the loss of life in a pretty sharp battle?

Mr. STAHLMAN. Yes, a skirmish. But if we will take the statistics of death to men who ride in vehicles and on horseback we will find it infinitely greater.

The duty, as the railroads of my section have seen it for the last eight or ten years, and the duty they are discharging faithfully, is to do all in their power to protect the lives of the traveling public.

Senator HIGGINS. Have the railroads you represent put on these appliances in as large a ratio as those of other sections?

Mr. STAHLMAN. I think not, as the reasons are that the earning capacity of the roads of my section is small as compared with other sections. The earnings are about \$4,300 per mile.

The CHAIRMAN. Per annum?

Mr. STAHLMAN. Yes, sir. The roads embraced in group No. 3 earn \$7,785 per mile.

Senator GORMAN. What section of the country is that?

Mr. STAHLMAN. The western section, east of the Lake region. The roads in group No. 1 earn \$10,441 per mile; and in group No. 2 \$15,829 per mile, so that our roads earn a little more than half of those in group 3, less than half of those in group 1, and less than one-third of those in group 2.

Senator HIGGINS. Is it your argument that the lack of earning capacity justifies you in killing and maiming people?

Mr. STAHLMAN. Not at all. My argument, Mr. Chairman, is that the first duty we owe is to the general public as common carriers. We must

put and keep our road in safe condition, and in order to do this we must take down our wooden bridges and put up iron bridges; we must take down our wooden trestles and put up iron trestles; we must arch our tunnels, we must put down better and heavier rails; we must put on better cars, we must put on better engines; we must improve the physical condition of our property, so as to carry, with reasonable safety, the people and property tendered us for transportation.

Of course, in addition to this we must do all we can to protect the lives and limbs of our employés. This I insist we have done and are doing as fast as conditions will allow. The coupler and air-brake question for freight trains is a comparatively new one. We have never been entirely satisfied that automatic couplers and air brakes would work, and until sufficient tests were made to establish this fact, we did not feel justified in incurring the expense. We knew tests were being made by roads in other sections and felt therefore that we ought to wait until they had developed the safest and best appliances.

It has been suggested in argument that because the railroads of the country are largely owned by persons residing at places other than where the roads are operated, the work of improvement is retarded. This is to argue that people who have money invested in railway property don't know how best to take care of their investments.

Does any one suppose that the man who is largely interested in railroad property will refuse to avail himself of the opportunity to get rid of the burden put upon him by the courts of the country for the loss of life and limb to employés as soon as he is shown the way? Not a bit of it. Show him how and he will do his utmost.

Has it ever occurred to the gentleman who made this suggestion why people in the sections where railroads are located have such small pecuniary interest in them? I will tell him, and for the purpose of illustration will take a single road in my section, which is perhaps the best one. The road in question has not averaged a cash dividend of $1\frac{1}{2}$ per cent per annum during the last fifteen years and has at various times had difficulty in paying the interest on its bonds. This road, moreover, is not bonded for what has been invested in its construction. The stock, therefore, represents a good part of the cost of constructing the line. I am speaking of the Louisville and Nashville. Who is there in our country, where money is loaning at 7, 8, 9, and even 10 per cent per annum, that wants a railroad investment with the possibility of a $1\frac{1}{2}$ per cent dividend per annum? It is for this reason that railroad property is largely owned in New York and elsewhere where capital is abundant and where they are in a position to let their investments remain in the hope of building up the country and of ultimately deriving something from the advance in the price of the stock and an advanced rate of dividend.

Mr. Chairman, the railroads of my section are not able to incur the expense of these improvements now. Some of the largest of them are in the throes of trouble to-day, and there is no telling where they may land within the next thirty days. We are not in a condition, I say, to have forced upon us an extraordinary expenditure at this time, but we believe as soon as the utility of the automatic coupler and air brake is established beyond question we shall be able to keep pace with the demands of the times. We have kept pace with the progress and improvement made up to this period and think we shall continue to do so, but we can not afford to spend our money on experiments. We must know that we are right before we can afford to go ahead.

The CHAIRMAN. Are you actually applying any automatic couplers?

Mr. STAHLMAN. Yes, sir. I say frankly not to the extent that has been done in other sections, for the reasons I have given.

Senator HARRIS. You are proceeding in that direction as fast as you can?

Mr. STAHLMAN. Yes, sir; and especially as rapidly as we feel justified, in view of the doubt which has surrounded the expediency of adopting these couplers up to this time.

Senator WOLCOTT. The men employed by your roads do not work under any contract that they will not sue for damages sustained. They can leave the road whenever they wish?

Mr. STAHLMAN. They are under no such contract, and can leave whenever they wish.

Senator HARRIS. Is the percentage of killed and wounded increasing or decreasing?

Mr. STAHLMAN. The statistics do not show whether there is an increase or a decrease. There ought to be a slight ratio of increase, because the number of men and the mileage are increasing.

Senator HARRIS. Taking into consideration the greater number employed and a larger number of miles, is the percentage increasing or decreasing in your opinion?

Mr. STAHLMAN. I think, if anything, it is decreasing. The men are growing more careful. They have more experience. They have been growing more and more so all the time.

We have, as a rule, a more reliable and better class of men in our service than you will find in the East or the larger cities of the West. The majority of the employes of Southern roads were born and raised in the sections traversed by the roads; many of them own their little homes, are educating their children, and are the heads or parts of happy households. They do not run from one city or section to another, or from one road to another. They are not agitators or disorganizers; they are, as a rule, quiet, good citizens and faithful workmen.

I do not understand that these people, our employes, have asked for legislation of this kind. They appreciate our conditions; are willing to let the matter rest and let us work out the problem, which they know will be done in due time.

The CHAIRMAN. If no legislation is enacted are you likely to have the means, and will you be able, to equip your cars with automatic couplers in any reasonable time?

Mr. STAHLMAN. Yes, sir. It costs very little more to put on the automatic coupler when the cars are built.

Senator HARRIS. When the Southern roads send a car to the shop for repairs, do they have the automatic coupler put on?

Mr. STAHLMAN. Not always. I can not state positively as to that. There has been much doubt up to this time regarding the utility of these couplers. I think there is very little doubt about it now. I think we have pretty well made up our minds that the coupler recommended by the master car-builders is the coupler that ought to be used, or one of that type. I assume, in view of the progress which has been made, with 20 per cent of the total number of cars in the United States already equipped with these couplers, that during the next year there will be added 25 per cent, because of the increased certainty of the success of the coupler; and the year following will show a still greater increase, so that within four years practically all the cars of the country will be equipped, leaving the entire responsibility with the transportation companies as to what particular type they will adopt, but giving them the opportunity to im-

prove upon the type, if during that period something better should develop.

Senator HIGGINS. Do you know whether or not on the new freight cars now being constructed they are putting the old link-and-pin coupler?

Mr. STAHLMAN. In my section in some cases, up to this time, yes, but I doubt if many cars will be constructed without the automatic coupler hereafter. Col. Haines, the president of the American Railway Association and vice-president of the Plant system, one of the leading railway systems of the South, has told you what he thinks of the question and what the Southern roads will probably do. He has given the subject a great deal of thought. What he said should therefore have weight with your committee.

The CHAIRMAN. When do you think the roads of the South will be ready to adopt the automatic coupler?

Mr. STAHLMAN. Two and a half years will, I am quite sure, bring us to a point where a conclusion will be reached.

The CHAIRMAN. Are you going to wait two and a half years to see whether anything better is invented?

Mr. STAHLMAN. I think not. We feel a very deep interest in this matter, not merely because we have the damage to pay if our men are injured, but because we feel an interest in the safety and well-being of our employes.

The CHAIRMAN. You can readily see if you wait to see whether something better is developed from year to year you are never going to do anything.

Mr. STAHLMAN. I grant that; but we have already pretty well concluded that the type recommended by the Master Car-Builders' Association can be made a success, and it is only because the Southern railroads were so poor and could not afford to experiment with anything surrounded with much doubt that there has been much delay. We know that tests and experiments were being made, and as soon as satisfied which is the best coupler to adopt we shall be ready to go ahead with the work.

Senator GORMAN. What would be the result financially if you were required to equip all your cars within five years?

Mr. STAHLMAN. It would cost, perhaps, \$10,000,000.

Senator CHANDLER. Why would it cost that sum?

Mr. STAHLMAN. I think I can safely say that the railroads of the South will average four cars to the mile. There are, say, 25,000 miles, making a total of 100,000 cars.

Senator JONES. You say there are a hundred thousand cars?

Mr. STAHLMAN. Yes, sir.

Senator JONES. At \$25 a car that would be \$2,500,000.

Mr. STAHLMAN. You are quite right, Senator, if confined to couplers alone, but with air brakes included the cost will not fall much short of \$100 per car, or \$10,000,000.

Senator HIGGINS. Would it do you any worse harm than drive you to foreclosure, and are you driven to that point of resisting foreclosure by killing people?

Mr. STAHLMAN. Not at all; we are simply awaiting developments.

Senator HIGGINS. They can sell you out. Some people will buy a railroad and run it without killing people.

Mr. STAHLMAN. I have not heard of such a road. I didn't suppose, at all events, that Congress cared to indulge in legislation calculated to wreck railroads; that it would rather aid in building up than pull-

ing down, and [laughingly] that Congress, if so much impressed with the necessities of the hour in respect to couplers and brakes, might see fit, instead of indulging in a wrecking process, to appropriate money to make these improvements for such roads as are not in a condition to do so themselves.

Congress has in the interest of the public weal, under the "public-welfare" clause of the constitution, done much in this direction. The history of legislation shows that Congress has appropriated from time to time to improve the navigation of the lower Ohio, Mississippi, Tennessee, Cumberland, Alabama, and other rivers of the South, sums aggregating over \$60,000,000. These appropriations (at no time antagonized by the railroad people of our section), have largely increased the competitive forces of river transportation and to that extent reduced the earning capacity of the Southern roads. If it was proper for Congress to do this in the interest of competition and trade, why not right to appropriate a small sum in the interest of life and limb?

Senator WOLCOTT. Do you understand that the Janney coupler is an insurance against accident?

Mr. STAHLMAN. I do not.

Senator GORMAN. Do you think it would be safe for Congress to specify through a commission or otherwise any particular coupler?

Mr. STAHLMAN. I do not. I think it would be a great mistake. We had to change the Westinghouse brake and the coupler used on passenger trains after they had been in use for some time and the probabilities are changes in the "master car-builders' type" for freight cars will also be necessary. For Congress to say or appoint a commission with power to say what type of coupler or brake are to be used, will be the means of shutting off all improvement in the future, no matter in what form that improvement shall present itself.

This inquiry, for which I beg to thank the Senator, brings up the additional question as to what railroads have done to minimize the risk of running freight trains, and thus promote the safety of their employes.

Some years ago it was no uncommon thing to see trains of freight cars of many different heights and size. The bumper and drawbars of one car would be two and a half feet from the track, while those of the car adjoining would be three to three and a half feet. The cars thus constructed could not be coupled at all except with the use of a crooked link. It was extremely difficult and dangerous to couple and uncouple these cars. It was for the purpose of uniformity in the construction of the cars that the Master Car Builders Association was founded, and as a result of the efforts of this association we now rarely see a car with bumpers not of uniform height. The association has gone so far that the wheels and axles are uniform; the body of the car is practically uniform. Everything has been done to bring about uniformity, and just as fast as conditions would permit the railroads have adopted the recommendations of the Master Car Builders Association. We of the South have, for the reason given you, been a little slower probably than the rest, but in the main have kept pace with the progress and development of the age, and shall not be far behind in respect to the pending matters when all reasonable doubt shall have been removed as to the utility and safety of the appliances in question. That we have about reached this point, I am quite persuaded.

I thank you, Mr. Chairman and gentlemen of the committee, for the patient and attentive hearing which has been accorded to me.

STATEMENT OF EDWARD A. MOSELEY.

Mr. MOSELEY. I desire to read a communication from Mr. Spencer Smith, one of the railroad commissioners of Iowa, who has spent much time in the study of this entire subject. The communication is addressed to the honorable chairman and members of this committee. As secretary of the committee on safety appliances of the national convention of railroad commissioners, I desire to read this communication, Mr. Smith being a member of that committee. It is as follows:

IN THE MATTER OF SAFETY APPLIANCES FOR FREIGHT CARS.

To Senator Cullom, chairman, and the members of the Senate Committee on Interstate Commerce:

GENTLEMEN: It may be proper at the threshold of this conference to ask your attention to a brief statement of the preliminary work already done by the committee of which I have the honor to be a member, together with a review of some of the conditions that led up to the formation thereof.

At the national convention of the railroad commissioners held at the offices of the Interstate Commerce Commission, Washington, D. C., on May 28 and 29, 1890, the following resolutions were adopted:

Resolved, That the respective States should require either directly by law, or indirectly through the instrumentality of their railroad commissions, each railroad corporation subject to their jurisdiction to place driving wheel brakes and apparatus for train brakes on every locomotive constructed or purchased by it, and train brakes upon every freight car hereafter constructed or purchased by it, and upon every freight car owned by it, the coupler or drawbar of which is repaired by it, an automatic coupler of the master car builders' type at each end of the car.

Resolved, That Congress either directly by law or indirectly through the instrumentality of the Interstate Commerce Commission should take similar action.

Following up the position taken at this conference, the national convention held in Washington on March 3 and 4, of this year, after much discussion, appointed a special committee to prepare resolutions upon this question. The report of the committee was as follows and was adopted unanimously.

Resolved, First. That a committee of five be appointed by the chair to urge upon Congress as soon as possible after the opening of the next regular session, the imperative need for action by that body calculated to hasten and insure the equipment of freight cars throughout the country with uniform automatic couplers and train brakes and the equipment of locomotives with driving wheel brakes, and present and urge the passage of a bill therefor.

Second. That the committee, before presenting the bill to the appropriate Congressional committee, be requested, after public notice, to give a hearing to accredited representatives of such organizations of railroad officials or employes as may desire to be heard.

Third. That the secretary of this convention act as secretary of this committee.

Judge Cooley named the committee as follows: Hon. George G. Crocker, Massachusetts; Hon. James C. Hill, Virginia; Hon. Spencer Smith, Iowa; Hon. William E. Rogers, New York; Hon. John H. King, South Dakota. Hon. Edward A. Moseley became secretary by the terms of the resolution.

It will be seen that in the last adopted resolution the type of couplers was not specified, as was done in the resolution adopted the year previous, simply declaring for "uniform automatic couplers, train brakes and drive wheel brakes."

On February 28 the committee held its first meeting at Washington

City, perfected its organization by the selection of Hon. George G. Crocker, of Massachusetts, as chairman, and prepared a list of questions to be sent to all of the railroads of the United States, viz:

- (1) What is the total number of freight cars owned, leased, or otherwise controlled by your company?
- (2) How many are equipped with automatic couplers?
- (3) State the kind of couplers used, and the number of cars equipped with each kind.
- (4) With what kind of coupler do you cause your freight cars to be equipped?
- (5) How many cars have you equipped with train brakes? State the name of the brake used.
- (6) How many locomotives does your road own, lease, or control? State the number equipped with driving-wheel brakes.
- (7) Please state in what way in your opinion the equipment of freight cars, with uniform automatic couplers, can best be hastened.

On November 10 and 11 the committee was in session in the Chamber of Commerce, New York city, and heard representatives from the American Railway Association, Brotherhood of Locomotive Engineers, Switchmen's Mutual Aid Association, Yardmasters' Association, Railway Employees' Association, Master Mechanics' Association, Order of Railway Conductors, Brotherhood of Railway Trainmen, Members of Safety Appliances, Committee of American Railway Association, and others.

Of the roads responding to the questions sent out, 69, representing 13,014 miles of road, favored national legislation; 88, representing 46,791 miles of road, favored voluntary action on the part of the companies; 2, representing 139 miles, favored state legislation; 17, representing 11,916 miles of road, favored the Master Car-Builders' type of coupler; 10, representing 4,830 miles of road, favored other couplers; 15, representing 9,418 miles of road, believed the matter still in the experimental stage, and 145, representing 38,986 miles of road, expressed no opinion as to the best means of bringing about uniformity. The Atchison, Topeka and Santa Fé and one other road favored the Safford automatic link-and-pin coupler. The fact was developed that there are now in use about 1,200,000 freight cars, of which 200,000 are equipped with automatic couplers of various kinds of the Master Car-Builders' type, and about 50,000 of other types. Of the 27,000 locomotive engines 17,000 are equipped with driving-wheel brakes. About 100,000 freight cars are equipped with Westinghouse train brakes, and some 15,000 with other types. Advanced figures furnished by Secretary Moseley, of the Interstate Commerce Commission, showing the killed and injured for the last fiscal year, were read as follows: For the year 1889, trainmen killed, 1,972; injured, 20,028; total, 22,000. For the year 1890, trainmen killed, 2,451; injured, 22,390; total, 24,841. An increase of killed and injured of 2,841, due to all causes.

Of these accidents, those due to the coupling and uncoupling of cars in 1889, killed, 300; injured, 6,767; total, 7,067. For the year 1890, killed, 369; injured, 7,841; total, 8,210; an increase of 1,143.

Falling from cars, year 1889, killed, 493; injured, 2,011; total, 2,504. For the year 1890, killed, 547; injured, 2,348; total, 2,905; an increase of 894.

The committee heard representatives of all the associations. Col. H. S. Haynes, president of the American Railway Association, speaking for that body, said that it has a standing committee on safety appliances that had gone through the same course of investigation as the committee now holding this session. They hoped to lessen the loss of life and limb. They represented 125,000 miles of road and had adopted the vertical hook type of couplers as their standard.

The railroad companies themselves had developed this type. His association had helped it along, but it was only within the last few years that something had been found to meet the requirements. The demand for this coupler was now almost universal. While it might not be the best thing, it was the best up to this time. Legislation calling for one kind of coupler would block progress. A million more cars to be equipped, at \$25 each, meant \$25,000,000; all the coupler-makers of the country could not turn out over 200,000 couplers per year, and this equipment meant five years to replace the link and pin, to say nothing of repairs and new cars. The railroad companies would do it as fast as possible. Engine brakes are now put on practically all locomotives ordered. The freight-train brake was not yet in the condition it ought to be for long trains. The air brakes cost twice as much per car as automatic couplers. It meant an outlay of \$50,000,000 to fully equip the rolling stock of the railways. That it is not claimed that the Master Car-Builders' type is the best form that can be devised, but that it is the best that has been made up to date, and the association does not feel that it can go further. That the railroads make a wider application of safety appliances in this country than they do in Europe, and in this particular case have devoted a great deal of time and money to the production of the type of coupler that has been recommended. On the Plant system there are now but two cars fitted with Master Car-Builders' couplers, but there are 1,000 cars under construction, each of which will be equipped with the Master Car-Builders' type, and I am told that this is universal on new work, showing how rapidly this work is going forward. It is doubtful whether the capacity of all the coupler-manufacturers in the country exceeds 150,000 cars a year. The truth is, said Col. Haynes, the companies are advancing as fast as possible where their mechanical and financial ability is concerned.

Mr. M. N. Forney, speaking for the committee of the Master Mechanics' Association, stated that the association which he represented was devoted to the mechanical development of railway rolling stock, and that for ten years this matter of a suitable coupler has been before the association, but the first actual steps were taken in 1884, when a committee reported to the association at Saratoga favoring the adoption of the vertical plane hook coupler, but it was not until 1887 that the contour lines were adopted by a two-thirds vote and a letter ballot. The owners of the patents on these contour lines surrendered their rights, so that while there are numerous patents on the locking devices and details, the contour lines are free for all.

No one is prepared to say that the type adopted fulfills all the requirements. There is only one class of men who are perfectly satisfied, and they are the inventors. Hence any legislation enforcing the adoption would result in the use of something not complete and not altogether desirable.

Legislation should take the form of recommendations, like the enactments of the British Board of Trade; it should provide for publicity, for recommendations, for acting as a sort of recording angel on the acts of railroad managers, and depend upon practical developments for the rest.

"It is safer for the present," said Mr. Forney, "to leave it in the hands of the railroads."

Mr. T. N. Ely, of the Pennsylvania Railroad, said that his company was putting these couplers and air brakes on as fast as possible, and no law could hurry it any.

Vice-President E. B. Thomas, of the Erie Railroad, said that his com-

pany was going as fast as possible in both M. C. B. couplers and air brakes, including cars repaired. In time they would refuse to have cars equipped with link-and-pin couplers.

Lucius Tuttle, New York, New Hampshire and Hudson, said that his road was advancing without legislation. All cars repaired had M. C. B. couplers put on all their new cars. All their engines were having air brakes put on. The coupler subject was taking care of itself. All the cars in the country would be equipped in about five years.

Maj. E. T. D. Myers, president Richmond, Fredericksburg and Potomac Railroad, spoke for the committee on safety appliances of the American Railway Association. They were doing all they could with both couplers and power brakes. He thought legislation the wrong way to do it. Public opinion was more powerful. That all the Virginia roads were putting them on; also the roads south of there, and without legislation. "No improvements in transportation," said Maj. Myers, "had come from anything but public opinion; that the Janney coupler was born in Virginia, and the roads there put it in use before there was compulsory legislation anywhere."

C. W. Bradley, general superintendent West Shore Railroad, said that all their fast freight cars had air brakes and M. C. B. couplers. All his connections were putting them on. He would like to reject all cars without M. C. B. couplers.

Mr. Frank Sweeney, of the Trainmen's Mutual Aid Association, said that the present varieties of draft irons were a great danger to switchmen. They could not educate themselves on the various appliances, there were so many. Something should be done to prevent the injury of switchmen. They were in favor of uniformity of height of cars. With the present mixture of couplings, cars had often to be stopped to pull the pins. With the M. C. B. type and a link it might fly either way in concussion. They wanted a uniform type of drawbar.

Regarding legislation there should be something done to enforce the standard height of cars, and some steps should be taken, either by legislation or otherwise, bearing on this subject.

Mr. D. B. Sweeney, of the Trainmen's Aid Association, favored the link-and-pin type. The vertical hook was too dangerous. They had to go between the cars to open the knuckle. The coupling apparatus was always broken. With the link and pin they knew when a car was cut, but when they threw up the lever they could never tell whether it would open or not. There was nothing better than a link and pin. Besides, said Mr. Sweeney, it is still necessary to go between the cars to open the knuckle, even when in good condition, and they will not couple on curves.

Mr. John H. Hall, of the United Order of Railway Employés and editor of the Switchmen's Journal, described vividly the duties of yard switchmen and the difficulties they labored under. Something should be done for them. The railroads were, he thought, doing all they could for them. He had many years' experience in yard work and preferred the link and pin. The conditions under which these men worked were getting worse, and legislation was necessary unless the railroads accomplished more. A greater number of men were hurt every year. If nothing but vertical planes were used they would still have to go between the cars, they were out of order so much. He believed the link and pin could be as automatic as the vertical plane. Yet if all cars had vertical plane couplers the condition would be a thousand times better than they were to-day. The switchmen favored uniformity.

Mr. A. D. Shaw, of the Yardmasters' Association, favored automatic

couplers and uniform length of drawbars and cars. There were too many good drawbars and too much mixture of good and bad.

Mr. Heberling, of the Switchmen's Aid Association, said that they favored a uniform link-and-pin type of a uniform drawbar, anyway. If two cars of the M. C. B. type were set together without opening the knuckles, they were sure to break. Give them a uniform drawbar of some kind and it would save the lives of many men.

Mr. Roach, of the same association, followed, speaking of the danger of coupling the link and pin with the M. C. B. type. All of the new type of couplers were a detriment and an annoyance to the switchmen.

J. T. Chamberlin, master car-builder of the Boston and Maine, said that their employes, who had spoken, knew better what was wanted than the officers. The men of his road all favored the link-and-pin type of coupler. The vertical-plane drawbars had broken badly on his road, and now they had none.

William McWood, of the Grand Trunk, said that personally he was opposed to the vertical-plane type. The switchmen's views coincided with his. He did not think the M. C. B. type gave good satisfaction. The pin still remained, and if it became bent the knuckle would not work. Neither were the knuckles interchangeable, which was a serious objection. More satisfaction and better results could be had from a good automatic link-and-pin coupler.

G. W. Rhodes, master car-builder of the Chicago, Burlington and Quincy Railroad Company, was of the opinion that they should not make haste too quickly, and while we may not feel warranted in giving an unqualified indorsement to the type that has been adopted, still it does seem to be the best that has yet been devised. The Chicago, Burlington and Quincy Railroad Company has paid the closest attention to the coupler question, just as it did to the brake matter in 1887. It has paid out money freely in the development of safety appliances, and feels that there is no need of legislation to coerce it into the adoption of the coupler or of automatic brakes. At present there are in course of construction for the road 2,500 cars, of 60,000 pounds capacity, which will be equipped with M. C. B. couplers and air brakes.

Hon. L. S. Coffin closed the hearing, appealing in the name of the associations represented by him for positive legislation, compelling the adoption of the M. C. B. coupler and train brakes.

The committee had a conference after the adjournment of the public hearing at which there was a free and full exchange of opinions and an agreement reached that each member of the committee should formulate a bill covering the needed legislation and submit the same to the others for their approval, the bill receiving the majority approval to become the committee bill. Shortly after the November meeting, two members of the committee ceased to be railroad commissioners, and so far as I am informed took no further action in the matter. A bill now in the hands of the secretary of the committee, Hon. Edward A. Moseley, has the approval of Mr. Rogers, of New York, Mr. Hill, of Virginia, and the subscriber, a majority of the committee and all of the present active members thereof.

That you will report this proposed bill back to the Senate as the bill of your committee is respectfully urged.

For many years railroad employes have suffered accidents resulting in personal injury and death, largely for want of uniformity in the appliances used in handling cars. With the beginning of railway car service, while the danger of the link-and-pin coupler and the hand brakes existed, it is known to have been in a proportionate less degree,

for the reason that both brakes and couplers were uniform or nearly so, and the trainman or yardman handling them always found the one that he handled to-day the same as that handled on yesterday. Inventive genius, however, ever active, has produced a multiplicity of couplers, many of them of great merit and in use on the different lines, and this greatly complicated matters and increased rather than lessened the danger.

State legislation providing for safety appliances in several States followed these inventions, and State commissioners in one State approved one type, in another a different type, and with each step intended to be in advance, the danger grew alarmingly. What is the remedy? Uniformity; and with so large a per cent of the cars passing across State lines this uniformity will come most rapidly when provided for by Federal legislation. That it will cost money to bring about this reform is admitted, but in what direction can the Government make expenditures that will bring results more to be desired? The Government has a life-saving service doing duty on the coast; a grand and humane service it is. About \$1,000,000 was expended on it last year and 350 lives saved, while 2,451 were killed last year in the railway service and 22,000 injured; and may not the General Government properly do something to decrease materially this terrible loss?

Many of the leading lines of the country are rapidly supplying their equipment with safety appliances, but not all in the line of uniformity. Then there are other lines that are making but little, if any, progress in this direction. The remedy is Federal legislation to compel the dilatory roads to properly equip their cars or to use the alternative of paying the expense attending the transfer of tonnage from their cars to the equipped cars of other companies.

That the present trend of the strong lines is in the direction of uniformity and safety, may be illustrated by the fact of the recent adoption of the M. C. B. type of coupler by the Boston and Albany Railway Company after much strenuous objection to it, because the action of the New York Central and other important lines virtually compelled such adoption. It is the obstinate manager and the manager of impecunious lines who stand in the way of progress in the direction of uniformity and safety, and to reach such cases is the strong arm of the law invoked.

It may be contended that the Interstate Commission now has authority to regulate these matters under its general powers of "inquiry into the management of the business," etc., but it has not so far in its work exercised that authority, nor is it likely to do so in the multiplicity of duties imposed upon it.

What is required is a law that will keep up the progress now being made, allowing a reasonable time in which the reforms are to be brought about, with sufficient elasticity to permit extensions of time in worthy and deserving cases, as is provided for in the English law of 1889, and followed in the bill formulated by the safety appliance committee which is now before you for consideration.

We are passing through the transition period with all its attending terrors followed by increased fatalities and injuries, and any legislation that fails to provide for uniformity is a step backwards. Uniformity in the drawbar, in the height of the car and in all of its parts and attachments is of pressing importance and can not be given too much consideration.

SPENCER SMITH,
Commissioner.

I will also read the bill Mr. Smith has prepared:

AN ACT to promote the safety of railway employees and travelers and requiring common carriers engaged in interstate commerce to equip their cars with automatic couplers of a standard uniform type and continuous train brakes and their locomotives with power brakes, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled:

SECTION 1. That on and after the 1st day of January, 1893, it shall be unlawful for any common carrier subject to the provisions of the act entitled "An act to regulate commerce," approved February 4, 1887, to put into use on its line any new locomotive engine, to be used in moving interstate commerce, as defined in section 1 of said act, that is not equipped with a proper power brake.

SEC. 2. That from and after the 1st day of January, 1893, it shall be unlawful for any common carrier subject to said "act to regulate commerce," to use on its line any locomotive engine in moving interstate commerce, as defined in section 1 of said act, that is not equipped with a proper power brake.

SEC. 3. That on and after the 1st day of January, 1893, it shall be unlawful for any common carrier subject to the said act to regulate commerce to put into use on its line for the purpose of moving interstate commerce, as defined in section 1 of said act, any new car or any old car that has been to the shops for general repairs to one or both of its drawbars that is not equipped with automatic couplers of a standard type, so constructed that such car can be coupled to and uncoupled from the next car without the necessity of a person going between said cars.

SEC. 4. That on and after the 1st day of January, 1897, it shall be unlawful for any common carrier subject to the said "act to regulate commerce," to haul or permit to be hauled or use on its line any car used in moving interstate commerce as defined in section 1 of said act, unless such car is equipped with automatic couplers of a standard type, so constructed that such car can be coupled to and uncoupled from the next car without the necessity of a person going between said cars.

SEC. 5. That from and after the 1st day of January, 1893, it shall be unlawful for any common carrier subject to the said "act to regulate commerce," to put into use, to haul or permit to be hauled on its line for the purpose of moving interstate commerce, as defined in section 1 of said act, any new car or any old car that has been to the shops for general repairs to its brakes that is not properly equipped with continuous train brakes sufficient to control the train that can be operated from the locomotive.

SEC. 6. That from and after the 1st day of January, 1893, it shall be unlawful for any common carrier subject to the said "act to regulate commerce" to put into use, to haul or permit to be hauled on its line any car used in moving interstate commerce, as defined in section 1 of said act, that is not properly equipped with continuous train brakes sufficient to control the train that can be operated from the locomotive.

SEC. 7. That any such common carrier violating any of the provisions of this act shall be liable to a penalty of \$100 for each and every such violation, to be recovered in a suit or suits to be brought in the district court of the United States having jurisdiction in the locality where such violation shall have been committed, by the United States district attorney of such district, and it shall be the duty of such district attorney to bring such suits upon duly verified information being lodged with him of such violation having occurred.

SEC. 8. That on the 1st day of July, A. D. 1892, each common carrier of the United States subject to said "act to regulate commerce" shall file with the Interstate Commerce Commission a letter ballot setting out the type of standard automatic coupler that it prefers, said Commission to have full authority to provide for such ballot and to decide upon the validity of all votes cast. The vote shall be based upon the number of freight cars owned by each line, and the type of coupler receiving 60 per cent or more of the entire votes entitled to be cast shall be the "standard type" of automatic coupler provided for in this act.

If the roads shall fail to establish a standard type of coupler, as herein provided, then the standard type of automatic coupler shall be that known as the Master Car Builders' type; that is to say, said coupler shall be of such size and dimensions, and shall conform to such contour lines as are set forth in plates 6 and 7 of the printed official report of the proceedings of the 25th Annual Convention of the Master Car Builders' Association, held at Cape May, N. J., June 9, 10, and 11, 1891, as modified by a circular from the Executive Committee of

said Master-Car-Builders' Association, dated Chicago, September 1, 1891, signed by J. W. Glond, secretary.

SEC. 9. That the Interstate Commerce Commission shall have power, upon a showing which they deem reasonable, to extend the time within which any particular carrier shall be required to comply with the provisions of this act, provided that no extensions shall be made beyond 1900. After the year 1900 any common carrier may refuse to accept or receive any car used in interstate commerce that is not properly equipped as required by this act, and the carrier loading or starting such car shall be liable for the damages, if any, resulting therefrom.

SEC. 10. Any employe of any common carrier engaged in interstate commerce, as defined in the act of February 4, 1887, who may be injured by any locomotive, car, or train in use contrary to the provisions of this act shall not be deemed guilty of contributory negligence, although continuing in the employ of such carrier after habitual unlawful use of such locomotive, car, or train had been brought to his knowledge.

I do not desire to occupy your time at any length, but while I appreciate to the fullest extent the philanthropic work of Mr. Coffin, who has spent, as I know, a great deal of time in the study of this subject, I feel it my duty to state to you one or two things. An inquiry was sent by me to every railroad in the United States, addressed to its president, asking him, on behalf of the committee on safety appliances, what he favored as to couplers.

MR. KING. That is our committee?

MR. MOSLEY. Yes, sir. Seventeen roads, representing 11,915 miles, expressed themselves in favor of the Master-Car-Builders' type, the type which Mr. Coffin urges upon this committee.

I do not know that I wish to say anything else except that you have had a number of bills and a great many different ideas presented to you, but with it all there has been no criticism of certain provisions of almost every one of the bills and that is as to the uniform height of the drawbars of cars, the use of train brakes, and the use of driving-wheel brakes upon engines. Those are things to which there has been no antagonism shown and in regard to which the people who are leading in this move ask Congress to legislate. No one representing the railroad has opposed any of these propositions. It is simply a question of uniformity, and as Senator Harris has so thoroughly stated to the gentleman here, there are thousands of men to be injured and hundreds, perhaps thousands, to be killed in the transition stage from anything, from the old link and pin to any other coupler, and the only desire that I can have is that that stage be lessened and the length of time be shortened so that as few men as possible may have to sacrifice themselves for the benefit of those who may come after them.

STATEMENT OF ROSWELL MILLER.

Roswell Miller, president of the Chicago, Milwaukee and St. Paul Railroad, submitted the following statement:

Is re the proposed bill for an act entitled "An act to promote the safety of employes and travelers upon railroads by compelling common carriers engaged in interstate commerce to equip their cars with automatic couplers and continuous brakes and their locomotives with driving-wheel brakes."

SECTION 1. There is no objection to this section.

SEC. 2. The date should be January 1, 1897, for five years' time will be needed in making the necessary changes.

SEC. 3. The date should be changed to January 1, 1897. The time

fixed by this section is especially objectionable, so far as it relates to cars upon which general repairs must be made. It is not always possible for railroad companies to get sufficient equipment, and again it frequently happens that they have in their possession such a large number of cars upon which general repairs should be made that a great deal of time is necessary in which to make repairs. Some of the smaller roads might be able to make changes within the time named in this section, but it is morally certain that many of the larger roads could not do it. A date should be named which will enable all of the railroads to make changes without loss or damage, and without interfering with their regular business.

SEC. 4. There is no objection to this section.

SEC. 5. This section is objected to, for the reason that it is possible to haul with entire safety in freight trains a certain percentage of cars which have no air brakes. Heretofore in bills relating to this subject it has usually been provided that after a fixed date no trains should be run without sufficient cars equipped with air brakes to control the movements of the train. Such a provision should be in this section.

SEC. 6. As a fundamental proposition, whatever coupler a railroad company may think to be the best, it has the right to buy and use; another company may, in good faith, prefer another coupler, buy it and have a right to use it. The circumstances of railroad traffic make it necessary for the roads to use couplers which will work together satisfactorily, and which will be as safe as possible. The railroads are already suffering from what may be called a combination of the Janney-Hein coupler, by means of which the companies are charged and compelled to pay \$10 per car more than the actual cost of the coupler. If an obligation be placed upon the companies to adopt automatic couplers within a certain time, the conditions of railroad traffic will necessarily compel them to provide an interchangeable coupler.

SECS. 7, 8, and 9. Nothing need be said of these sections at this time.

SEC. 10. This section should provide that, when common carriers have adopted the devices that they are compelled to adopt by law, they shall not be liable for any damage that may occur to persons or property in consequence of the use of such devices, unless such damage is caused by failure of the common carrier to use due diligence in keeping the same in order. It is believed by many good railroad men that there will be more accidents and more people hurt by the use of the automatic coupler than by the use of the link pin coupler—at least in the present imperfect form of the automatic coupler. If railway companies are obliged by law to use such devices they should be relieved from the consequences of such use, unless they negligently fail to keep the same in repair. If Congress determines that a device of a certain kind should be used, and the railway companies thereupon make use of such device, it is nothing more than just they should be absolved from all liability incident to such use, except where they are guilty of negligence in keeping such device in good order.

Generally. No legislation is necessary with relation to couplers or air brakes. Railway companies are progressive and are going ahead just as fast as they can. The importance of getting the best air brakes and couplers and of reducing accidents to a minimum is realized by all capable railway men, and they are constantly endeavoring to find the best means for the accomplishment of the desired end. It is believed that they will reach this result quicker without legislation than with it. The selection of a device should not be put into the hands of the switch-

men or the locomotive firemen, for they are not capable of judging, as they are without actual experience in the use of the various couplers, and because they have not sufficient mechanical skill to enable them to decide correctly. Every railway company has in its employ skilled mechanics and well-informed and responsible officers, and it is submitted that they are the proper persons, and the only proper persons, to determine what form of coupler or brake is best. Such men are sure to take into account not only durability and safety, but the question of cost, and the latter is a thing which would not be considered by a committee of switchmen or firemen, for they would not know how to consider it, even if they wished to.

Respectfully submitted.

CHICAGO, MILWAUKEE AND ST. PAUL R. R.
ROSWELL MILLER, *President.*

STATEMENT OF BRITTON & GRAY.

Britton & Gray, on behalf of the Atchison, Topeka and Santa Fé Railroad Company, submitted the following statement:

The necessity and desirability of such uniform coupling device as will give certain, safe, and continuous interlocking connection between the freight cars of all railroads is recognized by all the carriers, and constant effort is being put forth to accomplish that result. Among the many thousands of patented inventions on this subject, however, none have as yet been found combining the desired elements of safety, certainty, and durability.

In this connection, President Manvel, of this company, remarks:

Two or three years ago the Master Car-Builders gave it as their judgment, in their meeting, that what is known as a "vertical plane coupler" ought to be adopted; and, while there are different patents covering this invention, it was agreed that certain contour lines on the different devices should be used so that they would be interchangeable and couple with each other, even although of different make and of different patents. Our company with no usual enterprise purchased between 4,000 and 5,000 of these couplers at an expense of about \$60,000, and find now, after practical use, that it has probably got to throw them all away. It is found that after some use, and when the surfaces become worn somewhat, they will not stay coupled together, and to-day it is impossible to get men operating on the mountains to take a train over until the entire equipment is coupled up with the ordinary link and pin. It is found that one of these devices that has been in use, say from two to three years, will not couple properly with another device that is perfectly new. It is found, also, that the vertical plane device which has been used more or less in connection with the other couplers is not built so that it will bear the shocks that come to it, and it is quite sure that, if the opinions can be secured of all men on our line who have to use them, 95 per cent of them would say that they prefer the old link and pin coupler. I believe if any such legislation is attempted to be put upon the railway companies that it will only result in large loss without any compensating benefits.

With respect to the Master Car-Builders' type coupler, President Manvel further states:

I give it as my deliberate judgment, after spending my entire business life of over thirty years in the various departments of railroading, that this law is disposed to work with great injustice to the roads and will fail to bring about the object desired, namely, safety to life and limb. It is not what the railways generally want; it is not what the men themselves would select who have to use them, and people seem to be proceeding on the basis that a change to the Master Car-Builders' type will do away with the loss of life and injury to persons. That is, I understand, the fundamental reason for urging this bill.

You are advised that I have myself been urged to accept stock in one of these companies, that was to cost me nothing and was to secure my cooperation in the attempts that are now being made.

Please understand that no one is more keenly alive than myself to the desirability of adopting the best appliances to prevent injury to our own employes, but I look upon the present attempt as one not beneficial to the railroads and one not calculated to protect and save our men. For these reasons, this company having spent between \$50,000 and \$60,000 in a test of this kind of coupler, and having abandoned their use, I think I have good reason to object to the adoption on our line of a device that experience and observation lead me to believe will not bring about the result that all railroads are so anxious to accomplish.

As confirming President Manvel's views derived from long experience, the action of the switchmen's convention, held at Buffalo, N. Y., on September 24, 1890, is thus stated in the Chicago Evening Post of the same date.

PATENT COUPLERS CONDEMNED:

Buffalo, September 24.—The switchmen's convention last night selected Philadelphia as the next place of meeting. On the question of car-couplers the vertical plane or car-builders' type was almost unanimously condemned, the members citing the crippled delegates as a result of the many patent couplers used, and a motion was made and carried enforcing the link and pin bar with a recess on the side that affords protection to the operator.

Adoption of any system of coupler device involves an expenditure on the part of these carriers amounting to many millions of dollars. To thus provide the equipment of the Atchison, Topeka and Santa Fe system involves an expenditure of upwards of \$2,000,000.

Under these conditions of uncertainty as to the best uniform system which can be obtained and the enormous expenditure involved, it is imperative that there should be the most intelligent results before legislation is adopted compelling the use of any device or the expenditure of this vast sum. To that end a commission should be appointed of practical men, possessing in the highest degree the elements of experience and intelligence, to give immediate and thorough test of these couplers and to determine a uniform device which can be used with certainty, safety, and durability in transporting the vast commerce of the country. Such commission should be required to report within a year their conclusion and reasons therefor, to be then followed by mandatory legislation requiring the carriers to change and adapt their equipment thereto within such reasonable time as the circumstances then developed may justly permit. Whilst the dictates of humanity and common business prudence furnish the strongest incentive to each carrier for the adoption of these safety appliances of highest approved merit, yet the uncertainty surrounding the subject as at present developed and the enormous outlay required in reaching the end desired forbid legislation which is not the result of most thorough and careful test and does not rest upon the judgment of the highest practical and expert authority.

Such commission would be representative of the carriers and the best elements of intelligence and practical knowledge among the employes having such vital interest in the results. When that is secured legislation can be based thereon with certainty and the carriers can move forward in accomplishing the final and great end desired, with the assurance that the vast outlay required will bring the result desired, and the employes whose occupation subjects them to the risks of injury and death can feel that the uniform device thus adopted combines the highest elements of certainty and safety which the inventive mind has then accomplished. The coöperation of all carriers in the work of such commission would be strong and immediate, and it is beyond question that the facilities afforded thereto would be complete and exhaustive.

Such an independent commission should not be influenced by the efforts made to secure the adoption of any particular device because of the immense profit which would follow to its promoters, but have in view solely the great object to be attained. And the carriers when thus given opportunity to assist and join in these tests and to aid in fullest degree the work of the commission, will feel assured at the conclusion thereof that the legislation thus recommended and thereafter adopted sprung from untainted sources, and prompted by the sole desire to reach the great end of protection to life and limb of its employes. The conclusion of the commission should receive affirmative adoption into law by Congress direct rather than by delegated authority.

In the hearings heretofore had before the committee, a commission of this character, and aiming at this result, is strongly recommended in the statement of Mr. Frank P. Sargent, grand master of the Brotherhood of Locomotive Firemen (pp. 58-61), and of Mr. John Downey, a practical switchman of more than twenty years' experience (pp. 62-64).

The practical views of these gentlemen are worthy of highest consideration, and examination of their statements will show the strong grounds of practical reasoning on which they are based.

Respectfully submitted.

BRITTON & GRAY,

Attorneys Atchison, Topeka and Santa Fé Railroad Company.

MARCH 3, 1892.

At 12 o'clock m. the committee adjourned.

ADDITIONAL STATEMENT OF L. S. COFFIN.

Mr. COFFIN. Mr. Chairman and members of the committee, you will recollect that at the hearing before you on March 2 I gave way to Mr. Stahlman before I had concluded what I wished to say. At the suggestion of your chairman, Senator Cullum, I submit the balance of my remarks in writing:

Allow me to say that my earnest plea for that form of a law which recognizes the very important work already done by the railroads through their ablest corps of mechanics in developing a uniform system for the safe coupling of cars arises from my intimate knowledge of the wonderful progress made in this direction, and of the substantial and practical unanimity at which the large majority of the railroad carrier corporations have at this time arrived. The great demand, you must conclude from all that has been said before you on this subject, is for uniformity.

Practically we have that now by the voluntary action of a large majority of the railroads. Hence I am earnest in my desire to show you that all that is now needed is some simple law requiring a compliance with the will and practice of the majority.

This is a nation where the majority rule is recognized. Legislation now for the 275,000 men in this nation engaged in the operating department of railroad services need not be groping in the dark.

If the committee feel any hesitancy about the matter and would like fuller information I will leave with them some copies of the reports of the transactions of the National Master Car Builders annual conventions

and mark for convenient reference the parts more directly to the point under discussion. On page 28, of report for 1885, commences a discussion of the coupler question.

On bottom of page 33, see motion made by Mr. Wall, superintendent of shops of the Pittsburg, Cincinnati and St. Louis Railroad, controlling their 10,822 cars.

Page 39 shows resolutions adopted.

Page 128 shows committee appointed to test and collect information of couplers.

In report of 1886, on page 74, commences report of the above committee on the tests made at Buffalo, N. Y., which you will find very interesting, and commencing on page 81 and on will be found cuts of the couplers tested, which please see.

I would now call your special attention to the report of 1887, in which is record of the final report of the committee on safety couplers and the action of the convention thereon, and especially to the remarks of its chairman, Mr. Wall, on pages 194 and 195, now representing 11,474 cars, at that date, 1887. On pages 247, 248, 249, 250, 251, and 252 is the tabulated statement of the management of the roads giving the latter ballot on the action of the Master Car Builders establishing a standard coupler, showing over two-thirds for it, as well as the number of cars voted.

In report for 1890, on page 99, is found the action of the association instructing its executive committee to see to it that the standards adopted by them as to couplers were maintained.

In report for 1891—commencing on page 114—is found report of this committee on the maintaining of standard contour lines of the standard coupler. This is expressly interesting and instructive in view of the testimony of Mr. Downey that the standard couplers of different make would not couple. Please see ————. In this connection the circular marked O, by Mr. Cloud, secretary of the association, and of the executive committee, is expressly important as it shows the careful work of these expert mechanics in maintaining the exact lines of the standard coupler, and that from now on every coupler of whose-soever make will and must be exactly alike, and couplers made by A and B will as surely couple and interchange as two couplers made by A, or two made by B.

Before leaving these reports, allow me once more to call your attention to the number of cars represented in these annual meetings of this association. This you will find in each report, on the page before the index page; and in that of 1891 you will find 991,564 cars represented, which were at that time practically all the cars of the nation. This shows how unanimously the railroads themselves have agreed upon this matter of a uniform type of standard coupler. Hence it would be a fearful mistake to enact any law that would in any way disturb this harmonious progress. Legislation should be in line of this work. This is all I now have to say on the coupler question.

I will incorporate in my remarks at this point extracts from a letter from Mr. C. J. Ives, president and general superintendent of the Burlington, Cedar Rapids and Northern system of railroads. This system spreads out through Iowa, Minnesota, and Dakota.

OFFICE OF PRESIDENT,
Cedar Rapids, Iowa, February 27, 1892.

MY DEAR SIR: I have yours of the 24th instant, in regard to the placing of automatic couplers on freight cars, and in reply would say that since the Iowa law went into operation we have placed no others on cars undergoing repairs and expect to continue this until all our cars are equipped. We are also endeavoring to fill

the demands of the law in respect to airbrakes on cars and engines. * * * The transitory period, as you say, is a dangerous one, but the casualties on that account have not been so serious as I expected. The movement you mention of switchmen to do away with all automatic couplers and go back to the link and pin, will, I trust amount to nothing, as the hundreds and thousands of dollars already expended by railway companies for the present automatic couplers would be simply lost and no advance made in regard to improvement in this direction. I can not think it possible that any committee of Congress would recommend anything of that kind. * * * As so much has already been done in regard to this work, I trust you may be successful in making it interstate, that all the benefit possible may be derived from the heavy expense to which the railroads have been subjected.

Yours, truly,

C. J. IVES, *President.*

L. S. COFFIN,
Washington, D. C.

Also, a letter from Mr. J. M. Whitman, the general manager of the Chicago and Northwestern system, of which road the chairman of this committee has perfect knowledge. This system controls between 4,000 and 5,000 miles of road.

Mr. Whitman, under date of March 14, says:

DEAR SIR: In reply to the inquiry contained in your favor of March 12 in reference to the question of automatic couplers for freight equipment and the measures reproduced before the National legislature referring to the same question. I have to say, that the Northwestern company has adopted what is known as the M. C. B. standard vertical plane coupler. It has been applying this coupler to its equipment for the last three years. The progress, however, during the first year was slow, as the device had to be perfected in several details of construction and in strength of material. We have, however, at present writing about 5,000 cars equipped with automatic couplers and airbrakes. We are also applying automatic couplers and airbrakes to some 5,000 freight cars purchased for this year's delivery, and in addition are applying automatic couplers and airbrakes to our old equipment as rapidly as possible.

The close of this year will show probably 12,000 cars in the equipment of the Northwestern Company provided with automatic couplers and airbrakes—a very rapid introduction of these two devices. I can say that we are thoroughly satisfied that the M. C. B. standard vertical plane coupler is a success and we are fully satisfied with the device we are using. I have no authentic statistics as to the number of cars equipped with automatic couplers in the United States, but I am of the impression that the number will approximate about 15 per cent of the entire freight equipment. It can therefore be seen that a very considerable progress has been made in this direction in view of the fact that it covers only about three years general application.

I know from present knowledge that almost all of the large railroad companies of this country are applying automatic couplers to all new equipment, and any legislation that would disturb the existing condition of things in respect to the M. C. B. standard coupler would to my mind be exceedingly disastrous to the object to be attained, as it would render questionable and uncertain the work that is now being done, and in addition thereto would undo practically the work of the best mechanical minds of the country covering the period of the past five years.

This is in brief our position in the matter, and I trust that it will furnish you the information that you desire.

Yours truly,

J. M. WHITMAN,
General Manager.

MR. L. S. COFFIN,
Washington, D. C.

Permit me now to trespass for a little on your patience to discuss, very briefly, this brake question.

Many contend that a bill requiring "power" or "train" brakes—for they mean one and the same thing—is more necessary and important than one requiring automatic couplers. As a matter of fact there are nearly twice as many men killed yearly from being required to use handbrakes on freight than are killed from handling couplers, but there are not so many injured. The casualties are more fatal.

Statistics from the Interstate Commerce Commission reports show

that 557 were killed from falling from trains, and 2,348 injured in the year ending June 30, 1890. These men receive their death and injuries from being obliged to be on top of freight trains to use handbrakes. When is added to this the great number of accidents resulting from collisions, and running into open switches, and obstructions which could have been avoided had cars been equipped with power brakes under the immediate control of the engineer, the number would at least be swelled 50 per cent. The mere statement of this terrible fact, which no intelligent man will question, is all the argument that need be offered in favor of a law requiring that all interstate freight trains shall have enough cars in such trains equipped with power brakes so that the engineer can at all times control his train without requiring human beings to be at the cruel and inhuman exposure incident to the work of controlling trains by handbrakes.

This, too, when it is now admitted that if 20 to 30 per cent of the cars in a train are furnished with such power brakes that that train can be controlled easily and safely by the engineer, and at his instant wish:

I would call special attention to section 5 of the Henderson bill (H. R. 117, which is also in the printed report of my remarks of the hearing on March 2), which applies specially to this point. This provision should be incorporated in whatever bill the committee may see best to report, as it gives the railroad companies all the time they may need to fit up all their cars with power brakes, and still gives the employés immunity from exposure and danger, at a very early date. There are at the present time nearly, if not quite, 20 per cent of the freight cars already equipped with power brakes, and a law requiring all trains run in interstate traffic to have in each train enough of these power-brake cars so as to give the control of the train into the power of the engineer; say two years from date, or say by the first day of January, 1894, would be the saving of at least 600 lives a year from that date, and an amount of human suffering and grief simply beyond words to express.

This will not impose any unreasonable burden upon the roads. All admit—I mean the railroad officials—that it is only a question of time when every car will have a power brake. A law as stated will compel the roads to see to it that the cars now equipped shall be so distributed and switched up to the head end of the train so as to be utilized.

When the fact is patent beyond all question of doubt that with trains so managed these lives can be saved and this awful suffering prevented, can you gentlemen have any doubt about using your unquestioned prerogative in the behalf of these men?

In closing this discussion allow me to impress upon the committee that I do not stand here before you as merely one individual man—endeavoring to give you my own views and wishes—and leaving you to think that possibly I may have some mercenary ends of my own to accomplish. I stand here authorized to speak for not less than 90,000—mark the great hosts—90,000 men who are every day in the practical work of handling the cars that must be moved in the commerce of this great nation. These 90,000 men are in organized orders, so that their voice can come to you in no uncertain sound.

I lay before you the letter from the grand officers of the great and powerful order of the Brotherhood of Locomotive Engineers, some 30,000 in number, as shown in the report of the House Committee on Railroads and Canals, on this same matter, at the last Congress, which report I herewith submit and call attention, not only to this letter of the grand officers of the Brotherhood of Locomotive Engineers, but to the petition of Slatterly, Barnard, Lyons, and Hardie and 9,678 others to

the Interstate Commerce Commission on this matter. The resolution of the conference of State railroad commissions with the national commission; to the letter from the grand lodge officers of the Brotherhood of Railroad Trainmen; to the letter of Hon. Eugene V. Deto, grand secretary and treasurer of the Brotherhood of Locomotive Firemen; to the resolutions passed by Grand Division of the Order of Railroad Conductors at their annual meeting at Rochester; to the resolution passed by the National Association of Railway Surgeons; to the petition of over 10,000 practical railway brakemen in actual service, to the last Congress, all found on pages 2, 3, and 4 of this report.

Please bear in mind that while this great number of everyday railroad men are making or attempting to make their voice heard by Congress, asking for laws giving them a reasonable degree of safety in their employment—the benefit of which you and the whole public reap—I repeat, please remember there is still an equal if not larger number engaged in this same dangerous work who do not belong to these organizations, and who find it difficult to be represented here in any official and effective way because of this fact, a fact which exists in many cases and on many systems of roads, because of the expressed demand of officials to withdraw at once from these orders if any have joined them, on pain of summary dismissal from the service if they do not. I say, besides those thus organized, there are at least 100,000 more of these trainmen who are looking to you for a law that will give them a chance to live.

While all these practical men, numbering in these orders and out of them in the aggregate some 200,000 men, may not all agree on all the specific provisions of legislation asked, there is an absolute unanimity of sentiment and prayer for "uniformity" in these matters of couplers and brakes. They are willing to leave to your superior wisdom how that uniformity shall be brought about.

The views expressed by me before you in these hearings on the wisdom of a law running in harmony with the line already so clearly defined and so successfully being followed by the majority of the roads, and my opposition to any legislation that looks to creating a commission to select any specific coupler to be legalized by Congress, are my own individual views, my own best judgment, based on a very extended and exhaustive investigation of this whole matter during eight years past, leads me to say to the committee that the provisions of the Henderson bill (H. R. No. 117), are better calculated to bring the relief to the railroad employé asked for by them quicker and more effectually than it can be secured by any of the other bills now before Congress.

Still, I am not at all strenuous for this particular bill. If the wisdom of the committee will evolve a better and wiser one, none will be more ready to accept it than myself.

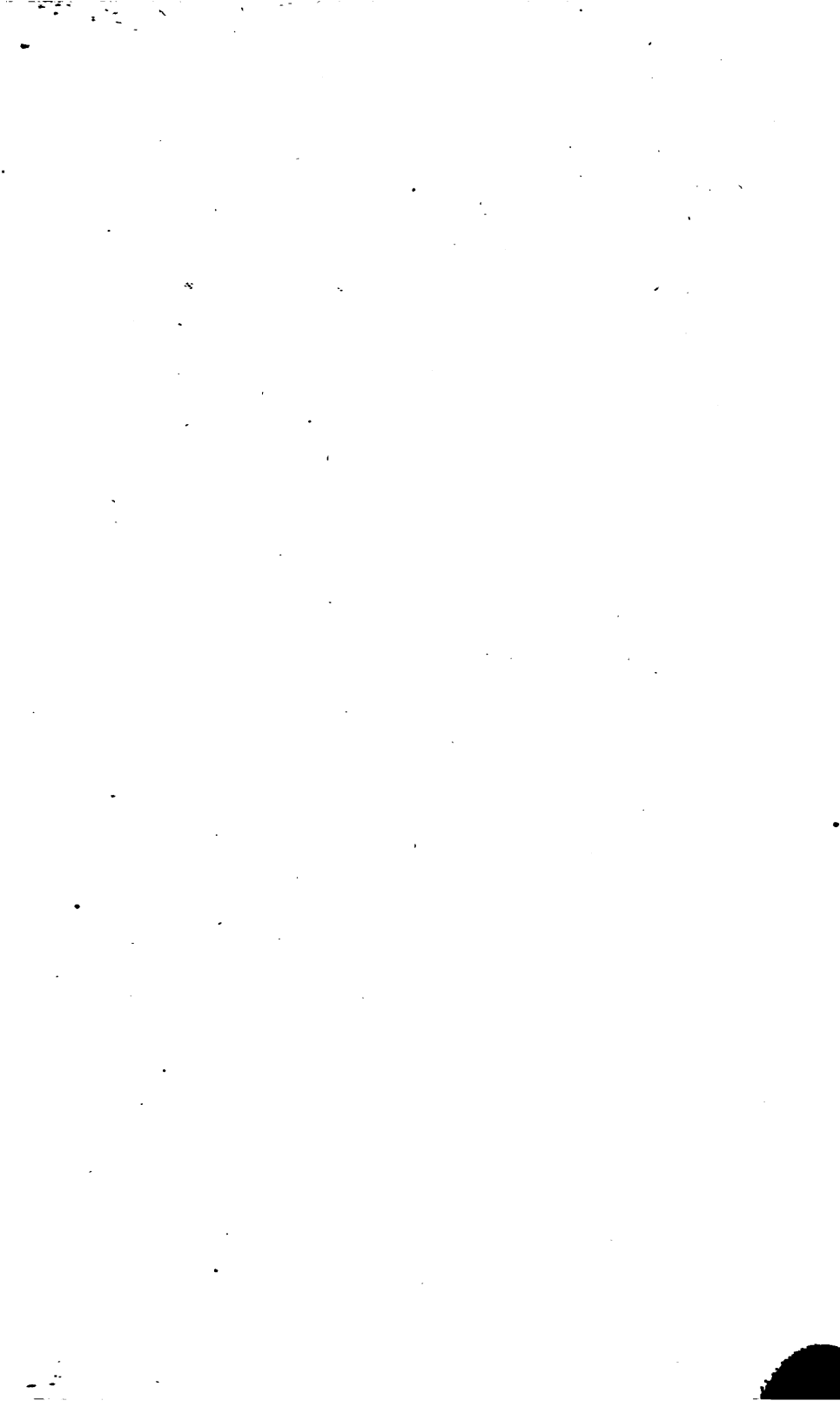
But I can not close this already, to you, too tedious hearing without urging upon you haste in this matter, whatever legislation you may see proper to report to the Senate. This awful work of death and suffering must be more or less extended, at the best, for a few years. Time will be required to make the necessary changes. What I plead for is that the beginning of the ending of this sacrifice of human life shall commence with as little delay as possible.

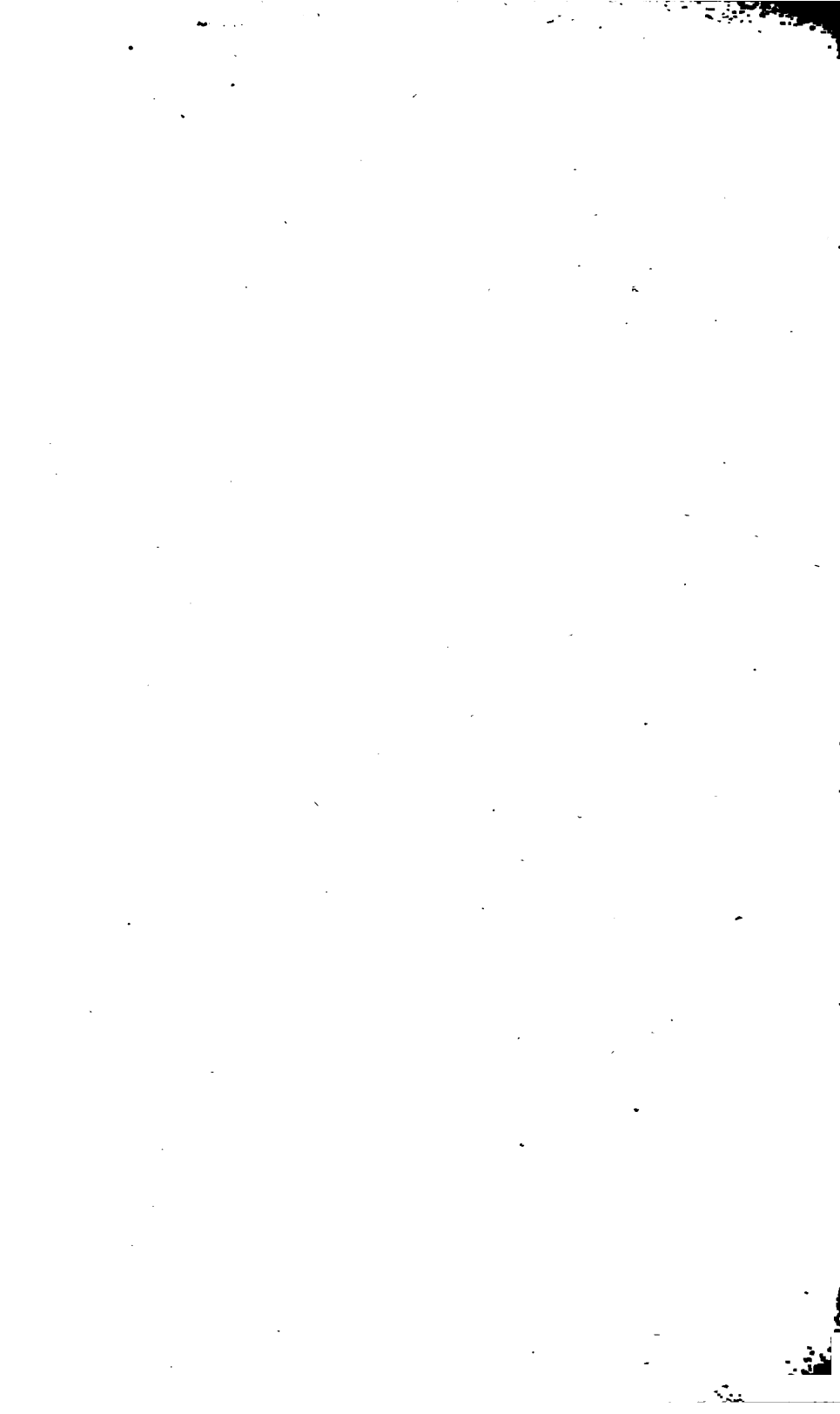
Bear this in mind, Senators, that the absolute and stern facts are, that from unquestioned data we know that an average of three of our fellows in the very prime of life must daily yield up life, and not less than thirty more must be made to suffer untold pain and loss of limb every day, while you are deliberating upon what is the proper way to

stop it—for stop it you can by proper legislation. The responsibility is now with you. The prayers and supplications of tens of thousands of wives and mothers, whose husbands and sons are earning them their daily bread in this necessary and honorable but dangerous work, go up to God that you may act wisely and quickly.

Beyond all question, the lives and safety from maiming and crippling yearly of not less than 12,000 of these faithful and brave men are in your hands. There is no way to stop this fearful work save by an act of Congress.

Aside from the death and suffering that can be prevented, is it not in place to ask of statesmen like yourselves, What of the economic question of turning out great armies of crippled men every year with such physical disabilities as to prohibit the possibility of being producers?





Calendar No., 1048.

52D CONGRESS, }
1ST SESSION. }

SENATE.

{ REPORT
No. 1049.

IN THE SENATE OF THE UNITED STATES.

JULY 22, 1892.—Ordered to be printed.

Mr. CULLOM, from the Committee on Interstate Commerce, submitted the following

REPORT:

[To accompany H. R. 9350.]

The Committee on Interstate Commerce, to whom was referred the bill (H. R. 9350) to promote the safety of employes and travelers upon railroads, by compelling common carriers engaged in interstate commerce to equip their cars with automatic couplers and continuous brakes and their locomotives with driving-wheel brakes, and for other purposes, having had the same under consideration, report it with an amendment in the nature of a substitute, striking out all after the enacting clause and inserting what is reported to the Senate, and the committee recommends that the bill as proposed to be amended be passed.

This subject has been before Congress for several years, and the Committee on Interstate Commerce has given hearings upon various bills which have been introduced and referred to it at different sessions, but has not heretofore been able to agree upon any bill which was regarded as satisfactory to the committee. While the committee has always believed it important that something be done to protect those engaged in the operation of railroad trains from injury, and in many cases death, it has been exceedingly difficult to arrive at a correct conclusion as to the character and provisions of legislation that would accomplish the purpose desired.

The President of the United States called the attention of Congress to the subject in his annual message in December, 1889, in the following language:

The attention of the Interstate Commerce Commission has been called to the urgent need of Congressional legislation for the better protection of the lives and limbs of those engaged in operating the great interstate freight lines of the country, and especially of the yard-men and brakemen. A petition signed by nearly ten thousand railway brakemen was presented to the Commission, asking that steps might be taken to bring about the use of automatic brakes and couplers on freight cars.

At a meeting of State railroad commissioners and their accredited representatives, held at Washington in March last, upon the invitation of the Interstate Commerce Commission, a resolution was unanimously adopted urging the Commission "to consider what can be done to prevent the loss of life and limb in coupling and uncoupling freight cars, and in handling the brakes of such cars." During this year ending June 30, 1888, over 2,000 railroad employes were killed in service, and more than 20,000 injured. It is competent, I think, for Congress to require uniformity in the construction of cars used in interstate commerce and the use of improved safety appliances upon such trains. Time will be necessary to make the needed changes, but an earnest and intelligent beginning should be made at once. It is a repre

to our civilization that any class of American workmen should, in the pursuit of a necessary and useful vocation, be subjected to a peril of life and limb as great as that of a soldier in time of war.

As did also the Interstate Commerce Commission in its annual report to Congress of the same year, as follows:

Two distinct ways of proceeding are naturally suggested. Congress may, should it see fit, pass definite statutes requiring that certain appliances be brought into use upon all the railroads of the country within a certain time; or, having in view the difficulty and importance of the question, it may prefer to make some provision for its further investigation, trusting that the mere fact that such an investigation is in progress will not be without immediate results.

This Commission is not prepared to recommend a national law prescribing appliances. It does not assume to say that such legislation will never be advisable, but it is not prepared to say that it is advisable at present. The difficulties of formulating a law from which good results could be expected are certainly very great, if not insurmountable, and, although pains have been taken to secure the views of all interested, no legislation of this sort has been suggested that seems plainly to be wise and safe. A statute requiring that all freight cars be fitted with automatic couplers by a certain date—a requirement against which it is probable that less could be urged than against any other suggested—has already been shown to be open to serious objections. It is impossible to say what the results of such a law would be, but there is no certainty that they would be good. If it did not bring about uniformity—and there is no assurance that it would—it would be most injurious to all interests involved, including those of public safety.

While it is no doubt highly desirable that results be reached as soon as possible, it is still more desirable that no mistake be made.

Following this and up to April 30, 1890, there had been introduced in the Senate three bills, as follows:

S. 3292, Mr. Hoar, "to secure the safety of freight cars employed in interstate commerce by the use of proper couplers, freight train brakes, and other appliances prescribed by the Interstate Commerce Commission."

S. 3665, Mr. Allison, "for the protection of property, trainmen, and other railroad employes in handling locomotive engines, freight trains, and freight cars engaged in interstate commerce."

S. 3692, Mr. Cullom, "to regulate the use of safety appliances for railway cars."

Beginning April 30, 1890, and continuing thereafter on various days, the Committee on Interstate Commerce of the Senate gave hearings in relation to safety couplers and power brakes on freight cars. During these hearings a number of prominent men interested in the subject were heard and a full discussion entered into. The opinions expressed as to what legislation, if any, was necessary to bring about the desired relief were so conflicting that the committee after careful investigation found it impossible to arrive at a conclusion.

At the second annual convention of railroad commissioners, held in Washington in May, 1890, it was

Resolved, That the respective States should require, either directly or by law indirectly through the instrumentality of their railroad commissions, each railroad corporation subject to their jurisdiction to place driving-wheel brakes and apparatus on every locomotive constructed or purchased by it, and train brakes upon every freight car hereafter constructed or purchased by it, and also upon such cars and upon every freight car owned by it, the coupler or draw bar of which is repaired by it, an automatic coupler of the Master Car Builders' type at each end of the car.

Resolved, That Congress, either directly by law or indirectly through the instrumentality of the Interstate Commerce Commission, should take similar action.

The President, in his second annual message, submitted in December, 1890, again called the attention of Congress to the necessity for greater uniformity in safety appliances, in the following words:

It may still be possible for this Congress to inaugurate, by suitable legislation, a movement looking to uniformity and increased safety in the use of couplers and

brakes upon freight trains engaged in interstate commerce. The chief difficulty in the way is to secure agreement as to the best appliances, simplicity, effectiveness, and cost being considered. This difficulty will only yield to legislation, which should be based upon full inquiry and impartial tests. The purpose should be to secure the coöperation of all well-disposed managers and owners, but the fearful fact that every year's delay involves the sacrifice of two thousand lives and the maiming of twenty thousand young men should plead both with Congress and the managers against any needless delay.

At the third annual convention of Railroad Commissioners the subject was discussed at greater length, and it was resolved:

First. That a committee of five be appointed by the chair to urge upon Congress, as soon as possible after the opening of the next regular session, the imperative need of action by that body calculated to hasten and insure the equipment of freight cars throughout the country with uniform automatic couplers and with train brakes, and the equipment of locomotives with driving-wheel brakes, and present and urge the passage of a bill therefor.

Second. That the committee, before presenting the bill to the appropriate Congressional committee, be requested, after public notice, to give a hearing to accredited representatives of such organizations of railroad officials or employes as may desire to be heard.

In his third annual message in December, 1891, the President again invited the consideration of Congress to the appeal of railroad employes for greater safety in the performance of their duties:

I have twice before urgently called the attention of Congress to the necessity of legislation for the protection of the lives of railroad employes, but nothing has yet been done. During the year ending June 30, 1890, 369 brakemen were killed and 7,841 maimed while engaged in coupling cars. The total number of railroad employes killed during the year was 2,451 and the number injured 22,390. This is a cruel and largely needless sacrifice. The Government is spending nearly one million dollars annually to save the lives of shipwrecked seamen; every steam vessel is rigidly inspected and required to adopt the most approved safety appliances. All this is good; but how shall we excuse the lack of interest and effort in behalf of this army of brave young men who in our land commerce are being sacrificed every year by the continued use of antiquated and dangerous appliances? A law requiring of every railroad engaged in interstate commerce the equipment each year of a given per cent of its freight cars with automatic couplers and air brakes would compel an agreement between the roads as to the kind of brakes and couplers to be used and would very soon and very greatly reduce the present fearful death rate among railroad employes.

On February 10 and 17, 1892, and subsequent days the Committee on Interstate Commerce of the Senate again gave hearings to those interested for and against legislation of the character proposed in this bill. At one of these public hearings Mr. H. S. Hains, president of the Railway Association, submitted the subjoined statistics in respect to that association, which has a membership of roads representing 122,000 out of the 170,000 odd miles of railroad in the country. The statistics have relation to but 91 roads belonging to that association, with a mileage of 75,000 miles and representing 700,000 cars. These roads have adopted what is called the Master Car Builders' type of coupler, which Mr. Hains says are mutually interchangeable.

These roads had in use, fitted with this type of coupler—

	Cars.
January 1, 1887.....	6,300
1888.....	11,000
1889.....	22,000
1890.....	47,000
1891.....	84,000
1892.....	134,000
February 1, 1892.....	136,000

With 26,000 cars under process of construction to be thus equipped. That many railroads are doing a great deal in the matter is undoubt-

edly true. We find, however, that on June 30, 1889, the total number of cars in the United States, exclusive of those in the passenger service, was 1,041,890, and in the year ended June 30, 1890, there was an increase of 94,787. Of this number but 16,287 were equipped with train brakes, and but 31,651, or about one-third of those put in use during the year were fitted with automatic couplers. At this rate it will readily be perceived that the time will not soon come, without legislation, when the freight cars of the country will be provided with safety appliances.

According to the report of the statistician of the Interstate Commerce Commission for the year ended June 30, 1890, the latest official statistics available, there were at that time, out of a total of 913,580 freight cars only 78,475 equipped with train brakes and but 75,485 fitted with automatic couplers.

In may be urged that these statistics are old, and it is a matter of regret that later data are not now available. At the present time it is admitted that the rate of increase in the application of safety appliances is somewhat greater. Still the very latest information shows that one road alone during the year ended June 30, 1891, added 1,800 cars to its freight equipment, not one of which was provided with automatic couplers; and this is but an example. While it is not to be doubted that very many companies are doing all they can, consistent with wise management, and are manifesting a great desire to relieve their employes from danger in the conduct of business (and to those compulsory legislation of the character in the bill reported can be no hardship), it is equally true that there are other railroad managers who require the force of a national law and the spur of public opinion to induce them to take proper steps to reduce the risks to those subordinate to them.

It may be stated that to equip a car with automatic couplers on both ends costs about \$25. There has been some variation between the figures given by different persons who appeared before the committee as to the cost of fitting cars with train brakes, some putting it at \$45 or \$50 per car, while others fixed it as high as \$75 per car.

The total number of railway employes June 30, 1890, was 749,301. The number killed during the year ended on that date was 2,451; and the number injured was 22,396. Of the above total of 749,301 employes, 153,235 were directly engaged in the train service, of whom 1,459 were killed and 13,172 injured. That is to say, out of every 105 men directly engaged in the handling of trains 1 was killed, and out of every 12 men so employed 1 was injured. In fact, it is proved by the statistics that the total loss in killed and injured in eight years is equal to the total number of men engaged in this service at any one time.

This fearful tale of suffering, of homes left desolate, and of widows and children bereaved, appalling as it is, does not denote the only loss borne by the railroad employes of the country. The dangers of their calling have caused them to associate themselves in relief societies, and the loss or injury of a member not only appeals to the sympathy of his fellows, but necessitates a contribution from their hard-earned wages.

The Government annually expends nearly \$1,000,000 for the safety of those who go to sea in ships. It is a well-known fact that the crews of these vessels are largely aliens, without families or homes in this country; and while no criticism of this fact is intended by this statement, it seems proper in this connection to bear in mind that the rail-

road employé is generally of the American soil, to the manor born, nurtured and bred an American citizen.

The necessity of national legislation looking towards uniformity in railway safety appliances is apparent, since it is admittedly a subject with which the various States can not successfully cope. Their incompetency to meet the situation is illustrated by the fact that the legislatures of Massachusetts, Iowa, Mississippi, Nebraska, Minnesota, New York, Ohio, Michigan, Wisconsin, and of other States, realizing their own inability to afford an adequate remedy, have called upon Congress to act. Were the use of freight cars limited to a single State then State laws would be adequate, but the cars within any State at any particular time are largely such as pass from road to road, and from State to State indiscriminately, no State line being recognized in railway traffic. The freight car of Massachusetts loaded with the products of that State may in three weeks reach California, passing from ocean to ocean; or the car of an Illinois road may pass through three or four States in a less number of days on its journey from the Lakes to the Gulf. Either of them may have the coupler sanctioned by the State from which it started, but from its lack of interchangeability with the couplers of those cars with which it must be coupled to perform its mission of transporting the commerce of the country, it produces death and destruction in every freight yard it enters.

The committee heard the delegates of the Massachusetts legislature, who under the instructions from that body formally presented the legislative resolution of 1891, and also that of 1892. They heard, too, representatives of the organizations of the railway employés, earnest, strong men who for years followed the occupations of switchmen, brakemen, etc., some of whom had suffered in mutilation of limb the necessary consequence of such employment and who were thus, from actual experience, well qualified to speak for their fellow workmen and the organizations they represented. These representative men, speaking for thousands of their associates, say that what they desire is uniformity, and that the danger of their calling has increased rather than diminished by the introduction of different types of couplers; that it would be far better to return to the old link and pin than to have so many kinds and styles of couplers in use. One of them, in every sense the type of an American switchman, said:

You want to understand that the switchman's life in the day time has an even chance, but the man who works after dark has not the ghost of a show under the present system of things. All he has is a little bit of a hand lantern which throws a light 10 or 20 feet. He goes in to make a coupling, and he does not know the conditions that exist there. He does not know whether it is a Janney or a Hinson, a Dawling, a Drexel or some other kind of a draw-bar. We want something uniform—something that is standard—we want something made on the same model all the way through, and nothing else.

His statements are borne out by the facts, for investigation shows that among the trainmen there was an increase in the death rate of more than 10 per cent in 1890 as compared with 1889, and the efforts of many of the railroads to increase the safety of their employés has by the mere lack of uniformity and interchangeability of couplers added to the difficulty. This fearful increase of risk and hazard is worthy of serious consideration. Among no other class of organized labor is it so great, and, as before stated, one of the chief causes is the great variety of couplers used.

The last report of the Interstate Commerce Commission shows that thirty-seven different styles of couplers are used. It is not claimed

that this number covers all those now being experimented with, while it is estimated that there are seven thousand patented safety appliances.

What the railroad employes need to secure greater safety in the performance of their duties is uniformity. They want all couplers alike and perfectly interchangeable. Under existing conditions it is impossible to tell, before going between the cars, whether the employé will find the ordinary link and pin to couple together, or two different varieties of the improved couplers now in use.

While it is true that the railroad managers who express themselves in favor of voluntary action toward uniformity by the roads are in the majority, too much weight should not be given to such testimony, as it can hardly be expected that railway companies will recommend laws compelling the expenditure of large sums of money, even if the time allowed should be extended indefinitely.

The committee is fully impressed with the desirability of leaving the railways to work out the problem without legislation, but on the other hand it can not be unmindful of the necessities of the situation and the increasing dangers to which employes are subjected on account of lack of united action on the part of the roads.

The committee listened with interest to the chairman of the committee representing the National Convention of Railroad Commissioners. A member of that committee and its secretary, together with others who have given careful attention to the subject, admit the condition which exists, and the differences among them relate merely to the proper remedy. While such variance of opinion exists to a greater or less extent, they are all agreed that legislation which allows each road to put on any automatic coupler its judgment dictates will not meet the requirements and will simply increase the evil.

It seems necessary, should a compulsory law be enacted, that some system of inspection should be established. It is, therefore, by the substitute for the House bill made the duty of the Interstate Commerce Commission to enforce the provisions of the proposed law.

The committee has given earnest attention to the subject, but has been delayed in reporting to the Senate by the conflict of opinion of those who were in favor of legislation as to the proper remedy to be applied and in order that no mistake should be made by legislation which should aggravate rather than diminish the awful loss of life now existing. At one time during the present session the committee felt that without more information than it possessed or could procure immediately, the testimony of men of all classes, railroad managers, engineers, switchmen, brakemen and others differing so widely on the question of the exact provisions of an act for relief, it would perhaps be better to defer any legislation compelling railroads to adopt a uniform type of automatic couplers and power brakes upon their cars and locomotives until another session, and, in the meantime, to require the Interstate Commerce Commission to procure detailed information on the whole subject, to be reported to Congress at the beginning of the session in December next.

With that view the committee reported a bill of the character above indicated, and it passed the Senate. This bill, however, has not become a law, although it passed the Senate some time since, and the committee therefore believe it to be its duty to recommend the passage of the bill herewith reported and to secure its consideration and passage at the present session.

The committee annex hereto the testimony taken and ask that it be printed as a part of the report:

AUTOMATIC COUPLERS AND POWER BRAKES.

HEARINGS

BEFORE THE

COMMITTEE ON INTERSTATE COMMERCE OF THE U. S. SENATE
IN RELATION TO THE BILL (S. 811) FOR THE PROTECTION OF
PROPERTY, TRAINMEN, AND OTHER RAILROAD OFFICIALS IN
HANDLING LOCOMOTIVE ENGINES, FREIGHT TRAINS, AND
FREIGHT CARS ENGAGED IN INTERSTATE COMMERCE; THE
BILL (S. 893) PROVIDING FOR THE ADOPTION AND USE OF A
UNIFORM STANDARD AUTOMATIC CAR COUPLER, AND REGU-
LATING THE OPERATION AND CONTROL OF FREIGHT TRAINS
USED IN INTERSTATE COMMERCE, AND PROVIDING FOR THE
GREATER SAFETY OF RAILROAD EMPLOYÉS, AND FOR OTHER
PURPOSES, AND THE BILL (S. 1618) TO PROMOTE THE SAFETY
OF EMPLOYÉS AND TRAVELERS BY COMPELLING COMMON
CARRIERS ENGAGED IN INTERSTATE COMMERCE TO EQUIP
THEIR CARS WITH AUTOMATIC COUPLERS AND CONTINUOUS
BRAKES, AND THEIR LOCOMOTIVES WITH DRIVING-WHEEL
BRAKES.

WASHINGTON, D. C., *February 10, 1892.*

The committee met at 10 o'clock a. m.

Present: Senators Cullom (chairman), Wilson, Hiscock, Higgins,
Chandler, Harris, Gorman, and Jones.

STATEMENT OF W. E. RODGERS.

Mr. RODGERS. It may be proper to say, Mr. Chairman, that I appear here in consequence of having been appointed a member of what is known as the National Committee on Safety Appliances, at the last general Convention of the Railroad Commissioners of the United States that was held here in Washington on the 4th of last March. Under a resolution the convention provided that the committee should give a hearing to railroad companies and to accredited representatives of labor organizations, with a view of framing a bill and submitting it to Congress as soon after its opening session this year as possible, to compel the adoption of an automatic safety car coupler and certain other things, namely, the compelling of the equipment of engines with driving brake and certain other matters that are not so important. At least I will not speak of them at present.

I do not know how familiar the various members of this Committee may be with the car-coupling question. I, therefore, in a few words, will rehearse to you briefly the situation in the United States to-day.



nail, the result of this information was that there were about a million freight cars in the United States; that there were about 160,000 miles of railroad, of which 125,000 approved of the Master Car Builders' type. At the hearing before the committee in the Chamber of Commerce there were representatives from a large number of railroad companies; also from a large number of organizations of employés of the railroads of the United States. At that meeting, also, there appeared a committee representing the American Railway Association, which is an organization of railroads representing 125,000 miles of railroad in the United States, which committee, of which Col. Hains is chairman, and there is a member of it here now, Mr. Ely, of the Pennsylvania Railroad, expressed their approval of the Master Car Builders' type as against any other type. There was some opposition at that meeting to the Master Car Builders' type, but I think it was restricted to the upper part of New England, and came from the Boston and Maine railroad.

The CHAIRMAN. The committee will now take a recess until 1:30.

Thereupon, at 12 o'clock m. the committee took a recess until 1:30 p. m. At the expiration of the recess the committee resumed its session.

Mr. RODGERS. Mr. chairman and gentlemen, at the time of the recess I was just at a point in the narration of the situation where the committee had been appointed by the convention of the railroad commissioners of the United States, and had issued their circular calling for information, that the information had been received and compiled into shape by Mr. Moseley, secretary of the Interstate Commerce Commission. As I say, at the hearing that was had in the Chamber of Commerce on the 10th day of November before this committee on safety appliances the representatives of the railway association appeared and expressed themselves as in favor of the Master Car Builders' type—not of any particular patent, but of the Master Car Builders' type.

Senator HARRIS. Is that an association of railroad companies or of constructors?

Mr. RODGERS. Of railroad companies. The American Railway Association is the successor of the time convention. That was an association of the representatives of railroad companies, with a view to formulating rules for the operation of trains, for the management of cars, and such other matters as required the concurrent action of the railroad companies.

This association, or its representatives, appeared before the committee and approved of the Master Car Builders' type of coupler, but deprecated any legislation upon the subject on the ground, first, that they were equipping their cars as fast as they could, and secondly, that the coupler had not been perfected to the extent to justify compulsory legislation at this time.

At that meeting there were people representing other interests, notably a delegation from what is known as the Switchmen's Union, which comprises in its membership a large number of people engaged in the practical coupling of cars. These gentlemen, or their representatives, to the astonishment of the committee, professed a disinclination to the adoption of any automatic coupler. Upon close questioning, however, it appeared that their disinclination resulted from the dangers incident to the transition period; that while there was a coupler of one shape, and another of another shape, and another of another, the difficulties of coupling were greater than with the old link-and-pin coupler. It was also stated to the committee in a semi-private way, which I say publicly, that part of this opposition, a feature of it, was that these men

feared that if an automatic coupler were adopted there would be less demand for the expert services incident to the coupling of cars than at present. How much weight there is in that I do not know.

Senator WILSON. From what source did that objection come?

Mr. RODGERS. From the representatives of the Switchmen's Association of the United States, which is an organization of men engaged in this dangerous occupation; and, as I say, upon close questioning, and the testimony, which I suppose is before you, will show—

Mr. MOSELY. The committee have it all.

Mr. RODGERS. This fact was elicited. However, if an automatic uniform coupler was adopted and put into universal use, they admitted that the dangers incident to coupling would be reduced very much, if not to an absolute nullity.

Then, after the committee heard these various views expressed, it had a meeting at the Astor House with a view of formulating a bill to be presented to this Congress in conformity with the resolution creating the committee. Unfortunately the chairman of the committee, Mr. Crocker, had not reached a conclusion that was satisfactory to himself, and the committee adjourned on the night of November 11 without formulating a bill.

The CHAIRMAN. November 11, 1891?

Mr. RODGERS. Yes, sir; November 11, 1891. Thirty days elapsed, and I saw in the newspapers that the chairman of this committee had introduced a bill, which, in my opinion, was open to some objection, and I wrote to him requesting that the bill be not reported until the committee on safety appliances, of which I am a member, had had an opportunity to appear, or to agree upon a bill and present its views. Thirty days more elapsed and the committee was not called together. No bill was offered except one from Mr. Smith, of Iowa.

The CHAIRMAN. You mean your committee?

Mr. RODGERS. Yes, sir; the committee on safety appliances. No bill was presented except the one of Mr. Smith, of Iowa, and the one I presented for the consideration of the committee.

It seemed to me that the time had come when our committee, or some member of it, should present the result, at all events, of the investigations of the committee, and with that idea in view I transmitted to the chairman of this committee my views embodied in a bill which he introduced in the Senate, and which is to be found on the files. It is the second bill from the last on your files, namely, Senate bill 1618, to promote the safety of employes and travelers by compelling common carriers engaged in interstate commerce to equip their cars with automatic couplers and continuous brakes, and their locomotives with driving-wheel brakes. It is proper that I should say that the bill represents my personal views as a member of the committee, not the views of the committee, because they have not as yet expressed any views. The bill represents my personal views, resulting from the investigations of the committee and my previous investigation and trials in the matter.

Now, I shall invite your attention for a moment to the consideration of that bill. It is short; it certainly has that merit. It provides in its first section that after January 1, 1897, no common carrier shall haul, or permit to be hauled, any freight car engaged in interstate commerce unless such car shall be equipped with automatic couplers, so constructed as to couple by impact with the next car without the necessity of a person going between the cars, and so constructed as to be uncoupled without the necessity of a person going in between.

The next section provides that no common carrier shall haul, or permit

to be hauled, any car after January 1, 1897, unless that car is equipped with brakes that can be set and unset at any time from the locomotive hauling the train on which the car is.

The third section provides that locomotives shall be equipped with driving-wheel brakes; and a proviso is inserted that it shall be lawful, in case of accident or other emergency, to temporarily dispense with the use of automatic couplers, or continuous brakes, or driving-wheel brakes.

The fourth section provides that any carrier violating any provisions of the act shall be liable to a penalty of \$100 for each and every violation, to be recovered in a suit to be brought in the district court of the United States having jurisdiction in the locality where the violation shall have been committed by the United States district attorney of such locality, and it is the duty of the district attorney to bring such suit upon duly verified information being lodged with him of such violation having occurred.

The fifth section gives the Interstate Commission in special cases the power to extend the time for compliance with the provisions of the act for a period not exceeding two years.

The bill is modeled upon the statute in existence in the State of New York in regard to the same subject.

The CHAIRMAN. If that bill were adopted and became a law would this danger, which now exists on account of the variety of couplers, be avoided?

Mr. RODGERS. I think it would be avoided for this reason: While the bill does not specify what the coupler shall be, the theory upon which the bill is drawn is that the Master Car Builders' type has proved itself by the law of the survival of the fittest to be the one that will be adopted.

Senator HARRIS. About how many automatic couplers have been invented?

Mr. RODGERS. The name is legion.

Mr. ELY. There are 7,000 patents. I think there are about 10,000 of these devices.

Senator HARRIS. About what proportion of the cars are now equipped with automatic couplers?

Mr. RODGERS. The statistics developed by the circulars of the committee show that of the Janney type there are 40,231; of the Gould, 23,357; of the Hinson, 42,061; and those of the Master Car Builders' type, not otherwise designated, 13,279; making a total of 118,928.

Senator CHANDLER. Cars?

Mr. RODGERS. Yes, sir.

The CHAIRMAN. Is there any difficulty in having those couple together so as to avoid this danger which occurs from using different kinds of couplers?

Mr. RODGERS. No, sir. Among the Master Car Builders' type each one of these couplers will couple with any other of the same kind of type.

Senator HARRIS. There are 118,000 cars equipped with couplers of the Master Car Builders' type?

Mr. RODGERS. Exactly.

Senator HARRIS. What proportion is that to the number of freight cars in use at this time?

Mr. RODGERS. There are 978,161 freight cars. In round numbers it is about 12 per cent.

Now, it may be proper to say that the idea occurred to attempt to

legislate into existence a specific type of couplers, namely, the Master Car Builders' type, to define it in terms. There are a good many practical difficulties about that, and there were many objections to it, and it seemed to me, and it seemed best to those with whom I have conferred upon the subject—and there have been a great many people with whom I have conferred—to simply provide in the bill that the car should couple and uncouple by impact automatically, and that it would carry with it, in consequence of the start that the Master Car Builders have over all others, the final adoption of the Master Car Builders' type.

Now, I think it is clear that if any legislation upon this subject is enacted it ought to be—

The CHAIRMAN. I will ask you whether, in your opinion, it is or is not best to pass any law on the subject? I ask that question because many argue that it is best not to enact any legislation, many railroad men more especially, perhaps.

Mr. RODGERS. I think there is a fair opportunity for a difference of opinion there, but my opinion is that a bill can be enacted without doing harm and which will do good; that on the whole the balance in the way of expediency is in favor of the enactment of a bill of this kind rather than to let the matter go; and briefly for this reason: There is a number of progressive companies in the United States who are equipping their cars with automatic couplers as fast as they can do so. These companies deprecate legislation on the subject for the reason that they say they are doing as well as they can anyhow, and legislation is only in the way of a spur that will be annoying without being beneficial. And there are a great many other corporations who are not progressive, and who are not doing anything, and who will not until they are compelled to. It has been admitted that such is the fact.

The CHAIRMAN. They have run along on the old link-and-pin arrangement?

Mr. RODGERS. Yes, sir.

Senator HARRIS. Is it or is it not true, as a general rule, that railroad companies, under their responsibility at common law, which requires them to use the best appliances that can be used, are adopting the best couplers, as well as the best appliances of every other description, as rapidly as in the nature of things they can?

Mr. RODGERS. I do not think they are.

Now, you might say with regard to the steam-heating of cars that they would have gone on and adopted some other method of heating their cars than by having stoves in the cars without compulsory legislation. In point of fact they do not; and it was not until the State of New York, followed by other States, enacted compulsory legislation upon that subject that the railroad companies adopted steam heating. Now they are adopting it very rapidly. All over the State of New York they have adopted it, and a large majority of the trunk lines in the State have adopted it because they could not get their cars in the State without it.

One word with regard to the merits of the Master Car Builders' type as against any others. I will not take up your time by going into a dissertation of the mechanical features of the Master Car Builders' type as compared with others, but I am satisfied that if this bill is enacted into law the Master Car Builders' will be adopted, because it has the start so much beyond any other that no other one can hope to catch up, and if this bill is enacted into law I believe that railroad companies will be constrained to pay attention to the operation of the details of

this coupler in a way that if there was not any compulsory legislation they would not do.

The CHAIRMAN. Suppose your bill, Senate bill 1618, were passed and becomes a law. Will there be, under any circumstances, any necessity for a switchman to go between the cars at all in order to couple or uncouple the cars?

Mr. RODGERS. If they adopt the Master Car Builders' type there will not be. The law provides that there shall not be. They have to adopt a coupler with such details that it will not. That is put in in terms.

The CHAIRMAN. That bill does not say the "Master Car Builders' type," as I remember it, but it says "an automatic coupler."

Mr. RODGERS. Yes, sir.

The CHAIRMAN. Now, if the technical provisions of that law are preserved, the railroads in all cases will be required to provide such a coupler as will obviate the necessity of the switchman going between the cars?

Mr. RODGERS. They will; that is in special phraseology:

Shall be equipped with automatic couplers so constructed as to couple by impact with the next car without the necessity of a person going between the cars, and so constructed as to be uncoupled without the necessity of a person going between the cars.

Senator CHANDLER. What is the objection to requiring a person to go between the cars to uncouple them? Where is the danger in uncoupling?

Mr. RODGERS. Very little. If a man is between the cars, and there is a movement of the train or something of that sort it would be dangerous, possibly, to be in between. There is a number of devices that enable this uncoupling to take place from the side of the car, and it is better that it should be. I want to anticipate an objection here. In a number of these types there are devices on the side of the car by which the knuckle can be opened when the cars are apart, so that switchmen need not go between the cars, never mind how far they are apart. Of course if the cars are a considerable distance apart and are not moving there is no particular danger. He goes in and opens the knuckle with his hand.

Many of the couplers are so constructed, and there is no objection to that. This phraseology might even prevent him from doing that. That could be altered by saying without the necessity of a person going between the cars when they are within such a distance of each other, say 10 feet of each other, which might meet that objection. But there is a number of couplers where you do not have to go between the cars at all—where they can be opened, as I say, by a device on the side.

Now, I wish to say a word here. I do not think that it is a desirable thing to enact any legislation looking to the creation of a commission—I do not care how it is composed—that will adopt any specific form of coupler. I say this for the reason that the railroad companies now of their own free will and accord have come nearer to an agreement upon this matter than they are likely ever to come again.

One hundred and twenty-five thousand miles out of 160,000 are in favor of it. The switchmen, a large body of organized laborers, are also in favor of it. Mr. Coffin here represents an organization called the Brotherhood of Railroad Trainmen, which organization represents 175,000—

Mr. COFFIN. No, not in that. There are 122,000 in that organization.

Mr. RODGERS. It embodies a large number of men who are in favor of this, and an enormous preponderance of those interested, whether

employés or railroad companies, are in favor of this Master Car Builders' type, and I have no doubt whatever that legislation, such as is indicated in this bill, No. 1618, will, if enacted, adopt that type. Yet it gives elasticity, it gives railroad companies an opportunity to perfect the details. It does not stereotype anything, and from every point of view that I have investigated the matter, it seems to me that a bill such as I have presented here is the least objectionable from the point of view of the railroad companies, and likely to be most efficacious from the point of view of the trainmen.

The CHAIRMAN. I want to say that the first bill I introduced was more to get the subject before this committee and to draw out expressions from various interests connected with railroading, so as to arrive at what was the best thing to do if we decided to report anything.

Mr. MOSELEY. I would like to call Mr. Rodgers's attention to a statement he makes, and that is with reference to compiling these statistics which he has obtained from the replies to the inquiries sent out to railroads, that but seventeen roads representing but 11,915 miles have expressed themselves in favor of the Master Car Builders' type.

Mr. RODGERS. That is true so far as our circulars are concerned. My statement was based upon the statement, before the committee, of Col. Hains and Mr. Ely, representing the Railroad Association of the United States, which appeared before the committee at that hearing, and represented themselves as representing 125,000 miles. Is not that true, Mr. Ely?

Mr. ELY. I do not remember.

Mr. MOSELEY. I never knew that the railroads, representing 125,000 miles of road, have expressed any opinion in regard to the matter, and the only opinion I ever knew was the one which is here.

Mr. RODGERS. That is so, so far as those statistics are concerned. My statement is based upon the statement of Col. Hains, who represented the Railroad Association of the United States before our committee, and which association was in favor of the adoption of the Master Car Builders' type. I think Mr. Coffin was there.

Mr. MOSELEY. One hundred and twenty-five thousand miles of road were the only ones that replied to the circular of the Commission, and of that but 11,900 stated that they were in favor of the Master Car Builders' type.

Mr. RODGERS. That is, true, Mr. Moseley. I repeat that Col. Hains, representing that large organization, represented that they expressed themselves in favor of the Master Car Builders' type, but refused to recommend compulsory legislation for the reason I have given, and the number of miles I have represented was 125,000.

I think I have indicated and expressed, so far as I can think of them, the reasons why it seems to me if any bill at all is adopted it should be such a one as is to be found in Senate bill 1618.

Senator JONES. If it is not out of order, I would like to have the balance of Mr. Moseley's statement. He stated that he sent out circulars to 125,000 miles of railroad, and only about 11,000 expressed themselves in favor of the Master Car Builders' type. I would like to ask him the question as to whether any of these 125,000 miles of railroad expressed themselves against it?

STATEMENT OF EDWARD A. MOSELEY.

Mr. MOSELEY. In answer to the Senator, I desire to state that under the direction of this committee a circular was sent to every railroad in the United States. Railroads of 125,000 miles out of a total mileage of over 160,000 miles in the United States answered.

Of these roads, as to the question of the best means of bringing about uniformity in safety car-couplers, sixty-nine roads, representing 13,000 miles, are in favor of national legislation. Eighty-eight roads, representing 46,791 miles of road operated, are in favor of voluntary action by the railroads.

The CHAIRMAN. And against any legislation?

Mr. MOSELEY. Yes, sir; we so understand it. Two roads, representing 139 miles, want State legislation. Seventeen roads, representing 11,915 miles, are in favor of the Master Car Builders' type of coupler. Ten roads, representing 4,829 miles, are in favor of different couplers; so many that I have not classified them. Fifteen roads, representing 9,447 miles, expressed the opinion that the matter is still in an experimental stage, while 145 roads, representing 38,985 miles, have expressed no opinion in regard to the best means of bringing about uniformity in automatic couplers. The Atchison, Topeka and Santa Fé Railway Company and its auxiliary lines, together with one other road, express themselves in favor of what is known as the Safford coupler.

I want to say, Mr. Chairman and gentlemen, that the members of the committee appointed by the National Convention of Railroad Commissioners, of which Mr. Crocker is chairman, are, for various reasons, unable to attend this meeting. Mr. Crocker, however, has called a meeting to take place on next Tuesday in advance of another hearing which I understand this committee will give them on the following day. At that time there will also be present the committee sent by resolution from the Massachusetts legislature to call the attention of this committee and Congress to the subject. I have also, as secretary of the committee of the national convention, called the attention of all the persons whom I could reach who are at the head of the various organizations of railroad employes, and other persons interested, that they may be present at the meeting next Wednesday. It is the hope of Mr. Crocker that his committee may be able to unite in some action.

Some five years ago, while in the Massachusetts legislature, my attention was called to the manner of safety appliances. A short time after the organization of the Interstate Commerce Commission, under the direction of the chairman, Judge Cooley, who was fully impressed with the importance of the subject, an investigation was made. At that time I believe it was Judge Cooley's idea, and my own also, that the matter was one which could be very easily legislated upon and adjusted. As time has gone on, however, I believe his opinion has very much changed in regard to the matter, and certainly mine has.

I am now speaking not as secretary of any committee, but as a citizen who has paid a great deal of attention to the matter. It is not an easy subject to deal with; there are such great differences of opinion. There is a great difference of opinion among the very men to whose advantage the proposed legislation would inure. The railroad employe, particularly the one who belongs to an organization, has not only his own personal risk to consider, his sympathy appealed to by the loss or injury of a fellow employe, but he has also a pecuniary interest in the

matter, as out of his wages he is called upon to contribute to the relief of those of his organization who may be injured or killed in this service.

At the meeting in New York, Mr. Sweeney, Mr. Hall, and others of the Switchmen's Mutual Aid Association, who are distinctively representative men, and as much so as any other gentlemen who were there, stated that they were opposed to the Master Car Builders' type of coupler, and that the risk was increased by the use of them. I think, as Mr. Rodgers has stated, that the reason of this feeling is largely the difficulty of coupling cars which have have different kinds of appliances. I think it far better to have the old and existing state of affairs, the link and pin, than to have a certain number of cars throughout the United States with one kind of coupler and others with another.

Cars are not confined to the particular road for whom they are built, but they go all over the United States, and carry disaster into every freight yard they enter in the attempt to couple them with the old link and pin, while they may work automatically and perfectly with a coupler of their own make.

There are 1,000,000 or more cars in the United States to-day. About 190,000 have some particular safety device; the others have the old link-and-pin couplers. These 190,000 cars are the means, according to my observation, of bringing a great deal of death and injury to the men who are employed in the service. It is far better to retain the old link and pin than it is to allow cars to leave one road and pass from State to State and go across the country equipped with some device which, while it may work perfectly with similar devices, when it encounters the old link and pin and other kinds of couplers, is very dangerous from the difficulty experienced in coupling the cars.

It would appear to me, that a question to which the President has three times called attention, a question to which legislatures are now directing their attention, and a question which has been before this committee repeatedly, is in such a state that some legislation should be had. Any legislation which allows any road to put on any coupler it believes is going to meet the requirements of a law is not going to remedy the evil. Therefore, it seems to me that legislation which would create a board to be appointed by the President to investigate this entire subject, with power to call upon the inventors of safety coupler appliances (of which Mr. Ely states there are 7,000), to bring before them their couplers, having sufficient means to make practical tests, and at an early date report to Congress the result of their investigation with a view to such legislation as might be found necessary and convenient, would be the wisest and safest course to pursue.

STATEMENT OF THEO. N. ELY, GENERAL SUPERINTENDENT MOTIVE POWER, PENNSYLVANIA RAILROAD.

Mr. ELY. Mr. Chairman and gentlemen of the committee, I do not desire to make any extended remarks, but should be glad to be of any assistance that I can to the committee in solving this problem.

Possibly I had better call it "reporting progress," as I was here two years ago on a similar errand, the result of which was printed as part of the hearings of this committee.

We are always glad to know that our predictions have come to pass. In this instance the statistics, which I will give you, will indicate that my prophecy that railroads would proceed without compulsion has

been fulfilled, although I have not been able, in the short time at my command, to gather as complete information as I should have liked.

Before going further I would explain that I am not here as one opposed to anything that will better the situation.

The CHAIRMAN. Will you be kind enough to state what your relation is? Are you connected with the Pennsylvania Railroad?

Mr. ELY. I have charge of the rolling and floating equipment and kindred matters of the Pennsylvania road. This road has of its own volition put on a great many more couplers and air brakes than even a radical law would require; including cars under contract, about 25,000 couplers and 20,000 air brakes have been applied.

In the first place our aim is to reduce casualties as far as possible; and, in the second place, we think there will be an economy of operation in the use of something better than the pin and link.

I desire to be considered as one believing in the application of automatic couplers, and hope that this will be kept in mind in listening to to what I may say.

The President called attention to this subject two or three years ago, and the American Railway Association deemed it advisable to appoint a committee of its members to inquire into the very things about which you are now seeking information. This committee is called the committee on safety appliances, of which I have been a member since its appointment.

I am not here in that capacity, and only mention the fact to explain that I have in this way been able to obtain information as to the progress actually made in the introduction of automatic couplers on freight cars, commencing with the year 1887.

Less than one hundred roads and some twenty private lines, representing about 70,000 miles, have reported that in 1887 (about the time the Master car Builders Coupler was introduced), they had 6,400 cars fitted; in 1888, 11,000 cars; in 1889, 22,000 cars; in 1890, 48,000 cars; in 1891, 83,000 cars; in 1892, 132,000 cars; and in addition, that they have put on and contracted for 27,000 cars since January 1, 1892, all to be supplied with automatic couplers. These figures denote the relative progress, and must not be mistaken as representing the total number of couplers in use, which total would be largely in excess of the figures given.

This increase, from 6,400 to 132,000, should be very convincing that the railroads are in earnest.

The CHAIRMAN. I want to ask you here what roads have made the most progress in this work of adopting automatic car-couplers?

Mr. ELY. The trunk lines, principally. My time was so short that I only brought the totals with me, thinking it would be of interest to you to see how, from 1887 until 1892, even these few roads have increased from 6,400 to about 132,000 and have ordered 27,000 more.

The CHAIRMAN. What is your impression as to the other roads that have not reported; do you think they have done anything, or have they done much?

Mr. ELY. Yes, sir; I think many of them have.

At the other hearing, two years ago, a question was asked to the effect, Would it not be of advantage to the roads then applying couplers to have a whip used to drive into the fold those that had shown no inclination to act? The answer at that time was that we felt the moral effect of the larger roads would be sufficient.

It must be remembered that the automatic coupler was not a very well-defined thing four or five years ago, and many of the ideas about it

were crude. Many defects of a dangerous nature have developed from time to time; the question of safety demands that each step should be carefully considered, especially as the effects of wear can be learned only by actual service. So that on the whole it seems to me, judging from experience in the introduction of other appliances, that the progress has been phenomenal.

About a dozen manufacturers of the Master Car-Builders' type of couplers report their present capacity and general output as about 30,000 couplers per month.

The CHAIRMAN. Their capacity could be gauged according to their necessity without much trouble?

Mr. ELY. Yes, sir; of course they would increase their capacity to meet the demands.

Senator JONES. You say they are selling 30,000 monthly?

Mr. ELY. Yes, sir; and they say at 10 days' notice they can increase their capacity to 40,000.

This shows a remarkable and phenomenal progress, both in the large amount of money that has been invested by the manufacturers, and in the fact that while four or five years ago there was but one coupler that was promising, there are now at least five or six.

The CHAIRMAN. You are opposed to any legislation on the subject?

Mr. ELY. Yes, sir; but I do not like to say that too broadly. I am opposed to it because I think it will do harm and hinder development. If it would do any good I would be heartily in favor of it.

The CHAIRMAN. Your view is that it would not do any good?

Mr. ELY. It is; I do not believe we should make a law only because we do not know what else to do. The railroads have certainly shown great energy without law.

The CHAIRMAN. A great many people are being injured?

Mr. ELY. A great many; undoubtedly so; and we are all, the railroads as well as others, striving, in the cause of humanity, to do away with entirely, or at least reduce these casualties to the minimum; this is the only fair basis upon which to discuss the question. Will you permit me to ask that, in reviewing the statements which will be made, you will carefully consider the opportunity those who will testify before you have had for forming opinions of value. In other words that theory be not regarded as of equal weight with experience. We must not take a leap in the dark, and in my opinion every bill I have read [I have only to-day read the one referred to by Mr. Rodgers] would be the equivalent of so doing. Mr. Rodgers's bill, which happens to lie before me, says that couplers must be such that they will couple by impact, etc. Under it may not five hundred or more kinds of couplers be used?

The bill does not specify the Master Car Builders or other type. The commission of Massachusetts at one time approved five couplers; these five would not couple with each other and great confusion resulted. There is to-day a difference of opinion as to whether the Master Car Builders' type is really the best type. There are some roads in this country that declare themselves against it.

Suppose this bill should become a law. The latter could, and probably would, equip their cars with couplers of the link-and-pin type, and the other roads would at the same time be putting on the Master Car Builders' type. If the law is to be valuable, and to be of the service which it is intended to be, it must be such a law as will require that uniform couplers be used.

The CHAIRMAN. Do you not think that Mr. Rodgers's bill, which he has commented upon here, would require a uniform coupler?

Mr. ELY. Not by any means—far from it. Fifty or more different types of couplers could be used under that bill.

Senator JONES. Has experience shown that the use of the automatic coupler has greatly reduced the percentage of casualties on the road?

Mr. ELY. Not as yet. It has been said on the contrary that it has increased them largely—this may be so to some extent, but I think not to such an extent as is imagined. Of course when two things are not alike a man must hesitate a moment to see how they will go together. But there are so many of the Master Car Builders' couplers in use to-day, and so many of the old form, that men have come to know how to couple them together.

As said before I am not here to oppose anything that will bring about a better state of affairs, but rather to point out the unwisdom of any bill I have seen or can imagine—

The CHAIRMAN. Could you get up a bill that would bring about a proper state of things by which the railroads would be required to use one particular device, and still would result in benefit finally to the service?

Mr. ELY. I could not. I do not hesitate to say this for the reason that I have given much thought to the subject of late.

The CHAIRMAN. Then there is no bill yet that you have seen or been able to put in form yourself, that you think would be an advantage to these people in protecting them from being killed or injured.

Mr. ELY. No, sir; I do not know of any, and I have not been able to devise one myself.

I do not know how familiar the committee is with what has been done by the Board of Trade of England, which has been in existence fifty odd years. Although originally their principal duty was the regulation of rates and other traffic matters, they found themselves confronted a few years ago with just the character of work that is now before this committee. The Board of Trade appointed their inspectors from the Royal Engineers. They did not have authority to enforce their recommendations, but could call for men and things, and were not restricted in their investigations. The inspectors report to the Board of Trade, and the Board of Trade to Parliament as to their recommendations.

After an existence of forty years this is what a prominent member, Mr. Farrer, said:

(1) The railway companies have no right to object to any interference requisite for securing the public safety. They have a monopoly of public traffic, and are bound to do whatever is necessary for that object.

(2) Nor is it necessary to argue that railway administration is perfect. It may be admitted that, though their business is in general well and ably conducted, they are sometimes poor, sometimes niggardly, sometimes slow, and sometimes obstinate. Railway companies have also some of the defects of public departments in the size and cumbrous character of their official machinery and in the remoteness of the bearing of the important motive of self-interest in the directors and managing officers.

(5) But after all these admissions, general interference with the administration of railways is objectionable on the following grounds:

(6) By such interference you are setting two people to do the work of one. Double management is notoriously inefficient. One bad general is better than two good ones.

(7) You set those who have less experience of management and less personal interest in the result to control those who have more.

(8) Control is either apt to become formal and a sham, or if zealously and honestly exercised, to be rigid, embarrassing, and a hindrance to improvement.

(9) Many excellent things, the adoption of which is desirable for public safety, *e. g.*, the block system interlocking points and signals, efficient brakes, properly constructed ties, are not things which can be once for all settled, defined, and prescribed, but

things of gradual growth, invention, and improvement. Had any of them been prescribed by law at any time past they would probably not have been what they are now, and were they now prescribed and defined by law future improvements would be checked.

This is a most insidious form of evil, for we do not know the good which we thus prevent. It is no answer to say that Government control would be intelligent, and would encourage improvement. It is not Government or its officers who invent and adopt inventions, and those who do so are far less likely to improve when Parliament or Government has defined and prescribed a definite course, the adoption of which frees them from responsibility.

(12) Lastly, it is impossible to maintain at the same time any general system of Government control, and any effectual responsibility on the part of the companies. At present the companies are responsible to public opinion and to Parliament before which they have constantly to appear, and they are under heavy liabilities for accident and danger in courts of law. Once admit Government control and these liabilities are at an end. No one can find fault with a company for that which the Government has sanctioned. With a system of control, even Government inquiry will be useless, for the Government officers would be inquiring into their own acts.

(15) It is scarcely necessary to add that the reasons against Government control which are above advocated are entirely consistent with a thorough system of Government inspection and investigation. The function of throwing light on all parts of the railway system, of investigating all alleged dangers, whether accidents have happened or not, and of ascertaining the true cause of accidents which do happen, is one which the Government can exercise with the utmost possible advantage and without fear of dangerous results. It is one which is useful to the companies, for it points out to them real sources of danger, and relieves the public mind where there is unfounded apprehension of danger. It brings to bear on the companies the powerful motives of fear of public opinion, of Parliamentary pressure, of apprehension of loss of traffic, and of legal liability for damages. And it does this without ulterior ill-consequences.

The consequences that I am afraid would follow.

It is because these forms of remedy are in reality of very great efficacy, and because they are not inconsistent with government control, that I depreciate the latter.

This report was made at a time when Parliament had under consideration the advisability of giving this board of inspection authority to regulate safety appliances. Their opinion as seen was that they should not be given such authority.

Mr. Farrar has given this carefully-prepared opinion after years of experience, and I can not refrain from calling your attention to it, and asking for its your most careful consideration.

The CHAIRMAN. We want to find out what we ought to do in the premises.

Mr. ELY. Or rather ought not to do. It is possible that a carefully selected committee might be appointed, as indicated by Mr. Moseley a moment ago, to look into the subject and report as to what, if anything, it thinks should be done, not as to couplers alone, but also as to the broad question whether action by Congress is advisable or necessary.

The CHAIRMAN. If there is going to be any inside action by organizations it should be taken very soon. We can not have this subject hanging along here all through the session. We must come to a conclusion about it one way or the other.

Mr. ELY. I do not mean a committee to report to you now; I mean at some future time. I think you are pretty well convinced that there is a great deal of progress being made.

The CHAIRMAN. The only question is whether there is progress enough. As far as I am personally concerned I would much rather the common carriers would go on and do this without any legislation; but if they are not going to do it and in the meantime hundreds and thousands of people are maimed and killed every year, if there is anything that Congress can constitutionally do it ought to do it in order to hasten the stopping such a situation.

Mr. ELY. There is no doubt of that at all, and of course deaths and injuries will decrease following the adoption of a uniform coupler. I say again, be careful lest you make matters worse than they now are. There is one thing certain that a reduction in force will follow the introduction of a uniform self-coupler, and casualties will be proportionally less.

Senator HARRIS. What extent will the adoption of the automatic coupler probably reduce the force?

Mr. ELY. It is very difficult to answer except in a general way. It will be principally in railroad yards. It has been the favorite idea of our vice-president, Mr. Thomson, that it will some day be found advisable to classify railroads as to their physical conditions. This would be the first great step in the problem of safety on railroads. All this points to the appointment of some permanent commission to come between the Government and the railroads.

In conclusion, I wish to repeat, that in my judgment any bill drawn that I have seen will in the end do more harm than good at this stage of the situation.

STATEMENT OF MR. THOMAS L. GREENE.

Mr. GREENE. I have here the statistics of the railroad accidents in Great Britain. I will say that I have no interest in the matter other than that of a public writer and student of the question, and I have had in that a great interest for a number of years.

The point I wish to make is in reference to the statistics of railroads as printed in the last annual report, printed in the advance copy which I have here.

I was present at the meeting spoken of by Mr. Rogers in November last, and have been watching the subject with great interest, studying statistics when brought up. The point I wish to make is that the statistics here are not conclusive as to the kind of legislation which is needed. I am sure the committee will acquit me of any wish to say anything at all against safety appliances where human life or limbs are in jeopardy; if there is anything to be done or can be done to get rid of accidents of that description, I am sure I am with you.

But the statistician makes this remark:

No statement has yet been gathered of the proportion of casualties that might have been avoided if all cars were supplied with train brakes or automatic couplers.

The CHAIRMAN. That is the Commission's report.

Mr. GREENE. Yes, sir. I am quoting from page 76.

What I would bring before you is that this is literally true, because his own statistics, which are given in percentages on page 82, seem to be open to this objection, that the question of the automatic coupler is not carried out in such a way in this table as to form any basis as to what injury is caused by the link-and-pin coupler. My own impression upon that point from my experience in railroad affairs is that the actual form of the coupler has not killed and injured as many men as the popular impression indicates, and I have prepared here a little table which I can leave with you which is compared with what has been done in Great Britain.

The CHAIRMAN. To what other causes would you attribute the injuries in that table.

Mr. GREENE. I will give it, if the committee please, in a moment. In this official report of all the accidents which have occurred to rail-

way servants in Great Britain in 1890, which is the latest we have, 30 per cent of the killed among the employes are put down as owing to "walking, crossing, or standing on the track while on duty." I think every railroad man must admit that a very large proportion of the casualties on our own roads come from something like that—where trainmen are hurt, for example.

I should say also that the English statistics of accidents are not divided into causes exactly as are ours. Of all the employes killed in Great Britain in 1890, 30 per cent is put down as owing to "coupling, shunting, and caught between vehicles," while in our American statistics 15 per cent is ascribed to "coupling." The reason of the larger percentage due to these causes in Great Britain is not that more persons were killed in proportion to number employed, but that the other causes for accidents were very much less fatal in Great Britain. For example, 22 per cent of the fatalities to employes in the United States were owing to accidents to trains, while but 5 per cent is chargeable to that cause in Great Britain. That explains the difference in percentages of fatal accidents, because of coupling and switching, between the two countries.

While the American statistics do not include "walking, crossing, or standing on track while on duty" as among the causes, these are chargeable in Great Britain with nearly one-third of all the employes killed. It is possible that the accidents in the United States from these latter causes, which, as everyone knows, are really responsible for many deaths and injuries here as well as in Great Britain, may be put under some one of the other heads in the statistician's tables—presumably under the head of "coupling," which in many parts of the country and on many roads is a term used to cover more or less of switching and other yard work in general. My respectful suggestion to the committee therefore is that if these statistics are to be made the basis of a car-coupling bill, it would be well to find out how many of these accidents were owing exclusively to the form of the coupler.

Mr. MOSELEY. I want to say that the result of the statistician's report was the result of the railroads who have reported the number of men who have been killed and injured in coupling cars.

Mr. GREENE. That does not cover my point, for I am not criticising the good faith of the commission or its statistician.

Mr. MOSELEY. It is to conform to the railroads themselves.

Mr. GREENE. That is true. I have talked with a great many railroad men on the subject. The point is that the statistics up to the present time do not show the number of casualties caused by the form of the coupler. For example, suppose the car is thrown with some violence against another car and a brakeman should happen to be injured thereby, the form of the coupler would have nothing to do with that injury. Of course I do not wish to say that people are not injured in coupling, only that the number is probably less than would be inferred by the tables given.

Now, the total number of employes killed in the United States last year from coupling cars is given as 369, while the number that was injured and killed in trains is more than that. The proportion is from 15 to 22.

If it were possible to avoid some of our train accidents—in other words, if we could direct public opinion, for example, to the question of blocking or interlocking signals and appliances of that kind—we would really do the employes more service and save more lives than by legislating about couplers. From what the people who report to the

Interstate Commerce Commission say to me, I doubt very much whether the form of the coupler, since the statistician makes that remark that no statistics have been gathered, is really responsible for the stated number of lives lost or persons injured from "coupling."

As far as we know, the dangers from all services to train men are about 50 per cent greater in the United States than in Great Britain. This arises partly from the fact that fewer men, proportionately to volume of traffic, are employed on our railroads, and partly because the hurry of business is greater here.

I understand that the type is not patentable, but that practically we can not have the type without using some form of invention which is included in the other. Is that true, Mr. Ely?

Mr. ELY. Well, generally. I do not think that has much to do with it.

The CHAIRMAN. Are you, gentlemen, who are buying these devices now to equip your trains paying anything for the patent?

Mr. ELY. They are bought just like a chair, or any other manufactured article. I suppose if there is any royalty it is included in the price paid for the article.

The CHAIRMAN. What do you pay for one of these couplers?

Mr. ELY. The open price is \$25 per car. I think it amounts to 4½ or 5 cents a pound for the material. The cost of application is very little.

Mr. GREENE. I merely make the remark that more people are killed from falling from cars than by the couplers. That can be prevented if the company uses air brakes. But that is mixed up with the other question, because it is more difficult to fit an air brake to the cars when automatic couplers are not used. The air brake will reduce the expenses of a railroad. More people are killed through the lack of the air brake by falling from the cars, according to the statistician's own figures, than are killed by the couplers. That is why the board of trade is trying in England to form public opinion in regard to this matter. There are other subjects than couplers more important to railroad employes from their own standpoint.

Mr. RODGERS. I would like to have just one word in response to what Mr. Ely has said, which was suggested by his remarks. There appears practically before you, gentlemen, four propositions; one to enact a bill specifying what the form of coupler shall be; second, to enact a bill, such as I have suggested here, providing that an automatic coupler shall be adopted, and trust that the Master Car Builder's type has received such impetus that it shall carry itself. The third is to enact a bill creating a commission to go all over this subject, which has been gone over for years; and the fourth is to do nothing at all.

Mr. Ely is in favor of the fourth plan—to do nothing. He then squints at the idea of having a commission to go over these things and invite the inventors to come before them with their seven thousand patents, and dig over the ground and thresh over the wheat that has been dug and threshed over for the last ten years.

So far as legislation is concerned, I think the time has arrived for legislation to compel these indifferent roads to adopt some automatic coupler.

Second. With regard to the idea of appointing a commission, I have no faith in it at all. I think it will make confusion worse confounded, and throw into chaos what now is nearly getting into line.

With regard to the second proposition, to enact into law a specific type of coupler, I would like to ask Mr. Ely whether, if there is any law passed, he would prefer enacting into law some type, and if so the master car-builders' type?

Mr. ELY. I certainly would.

Mr. RODGERS. You certainly would ?

Mr. ELY. Yes, sir.

Mr. RODGERS. Now, my own impression is that that is not a very expedient thing to do; but if by the committee it shall be regarded as an expedient thing, I will say that I drew up some time ago a bill which would bring that about.

The difficulty with Mr. Ely is that no bill meets his approval. I am afraid he is waiting for the millennium to come before these brakes and couplers shall come. When the millennium comes I fancy all of us here will not care what kind of brake and coupler is used.

If it is considered by this committee, after having meditated upon the subject, desirable to legislate into existence the Master Car Builders' type, I will leave here a draft of a bill and call attention to the fact that at the proceedings of the Master Car Builders' Association held at Cape May, I think it was in June, 1891, they defined what the contour lines should be. That definition was subsequently modified by a circular from James W. Cloud, the secretary of a committee which was appointed by the Master Car Builders' Association at that time, and here is the circular setting forth what contour lines these couplers should conform to in order to meet with the requirements. So if it be regarded as expedient to enact that into law, I would suggest that the first section of the bill which I have presented be amended so as to read :

That no common carrier subject to the provisions of the act entitled "An act to regulate commerce," approved February 4, 1887, shall haul or permit to be hauled upon any railroad, after January 1, 1893, any car (other than passenger car) engaged in interstate commerce, as defined in section 1 of said act, unless said car shall be equipped with automatic couplers of the kind known as the "Master Car Builders' type;" that is to say, said couplers shall be of such size and dimensions and shall conform to such contour lines as are set forth on plates 6 and 7 of the printed official report of the proceedings of the twenty-fifth annual convention of the Master Car Builders' Association, held at Cape May, N. J., June 9, 10, and 11, 1891, as modified by a circular from the executive committee of said Master Car Builders' Association, dated Chicago, September 1, 1891, signed by John W. Cloud, secretary.

If there is any other way to define it and not stereotype it out of redemption, I do not know what it is.

I have also provided, if this alternative should be expedient, that the Interstate Commerce Commission shall have power to modify these contour lines if it shall be deemed expedient by them to do it.

In view of this suggestion of Mr. Ely, I will take the liberty of leaving with you a copy of the proceedings of the Master Car Builders' Association, and a copy of the circular that I have just alluded to, and the proposed bill.

Mr. ELY. It was not my suggestion. Mr. Rodgers asked, if any bill was to be passed, whether I approved of specifying the type of coupler, and I said, yes; if any should be passed it should specify A or B, or whatever it is, of the Master Car Builders' type. I did not suggest it.

Mr. RODGERS. Whatever that may be, I have this to say, that if the difficulties of enacting anything are so perfectly overwhelming; or, putting it in another way, if the objections to enacting a bill such as I have suggested are such as to leave it to the railroad companies, it really compels the adoption of the Master Car Builders' type by reason of the survival of the fittest.

Senator JONES. In view of what was suggested by Mr. Ely awhile ago as to the introduction of these couplers, and of the fact, as I believe he stated, that for the last five years the number in any one year has been

doubled in the next year; that now there are 140,000 cars which are equipped with these couplers, and the manufacturers of these couplers are selling 30,000 a month—I take it that the railroads do not buy these for fun—it would seem that they are being rapidly introduced, and if these figures should obtain, the entire railroad system of the United States will be equipped with these couplers by 1897, the time contemplated in your bill.

Mr. RODGERS. I will answer that question. One reason for the prompt equipment is that in many of the States of the Union there are laws already on the statute books requiring that the railroads within that State shall equip their cars with automatic couplers by a certain date.

Senator HARRIS. What States?

Mr. RODGERS. New York, Massachusetts, Connecticut, Iowa, and Nebraska, and there are other States. But the great State of New York, where pretty much every car in the United States finally brings up, and the fact that it can not get in there without having an automatic coupler under the statute existing at the present, has had a great deal to do with spurring these features on. I believe that the company represented by Mr. Ely, the Pennsylvania, and certain others will do what they can, and, while this legislation would not effect them much one way or the other, I may say that I know that there are many other railroad companies that will not do anything until they are compelled to do it, and the only way to bring about uniformity is Federal legislation.

Another feature of the bill suggested by Mr. Gréene that the statistics given in the reports that he has read do not show whether the people were injured from automatic coupler or some other kind of coupler, I may say in the State of New York, in the returns which were made to what was my board, we had the provision inserted as to whether the injury was done by means of an automatic coupler or some other kind, and I know of no case resulting from two automatic couplers coming together. There are a great many dangers resulting from the use of the old link-and-pin coupler.

Mr. ELY. I want to say that in considering the progress made in the introduction of couplers it should be remembered that there are a great many cars in existence so constructed that it will be impracticable to use the automatic couplers without many changes in the cars themselves, which is necessarily a slow process.

Senator JONES. What did you state was the price, the cost of automatic couplers on freight cars?

Mr. ELY. About \$25 on the car.

Senator JONES. For the pair?

Mr. ELY. Yes, sir.

Senator JONES. That would be about \$12.50 on each end.

Mr. ELY. Yes; we call it per car. It costs very little for labor to put it on if cars are built for it.

Senator JONES. Is it a fact that the standard coupler does not cost any more upon all cars?

Mr. ELY. Yes, sir.

Senator JONES. So that the roads are now spending about \$375,000 a month for couplers?

Mr. ELY. That is correct, as given to me.

Senator HARRIS. About what is the life of a freight car?

Mr. ELY. Fourteen or fifteen years.

Senator HARRIS. What would be the period of this automatic coupler? Would they last longer or not?

Mr. ELY. They would last much longer. It is like the knife, first the blade and then the handle. The parts are renewed as worn, and the coupler must always be kept in order.

STATEMENT OF HON. WILLIAM J. SEWELL.

Mr. SEWELL. Mr. Chairman, when Mr. Ely made his statement I was absent, attending another committee. I wish to know if Mr. Ely has gone over the ground to the extent of giving all the figures?

In the first place, there are about 1,000,000 cars in the country. There are about from 150,000 to 200,000 of the new automatic couplers adopted and already on the cars.

Mr. ELY. I think it is nearer 200,000. I suppose there are 200,000 in use to-day.

Mr. SEWELL. That is 20 per cent of the whole number. That has been done without any legislation. The Pennsylvania railroad, I believe, has from 110,000 to 120,000 cars.

Mr. ELY. We have about 25 or 30 per cent.

Mr. SEWELL. They are building now about 5,000 cars, all of which will be equipped with the automatic couplers and air brakes. Every car that goes into their shop has put upon it the automatic coupler. So that 20 per cent up to this time, without any legislation, have been supplied with this automatic coupler. I was anxious to hear Mr. Ely state what additional progress has been made, as compared with three years ago. That is to say, if it were 20 per cent three years ago, it has gone up to 30 or 40 or 50 per cent.

The CHAIRMAN. He has given us those figures.

Mr. SEWELL. The Master Car Builders Association is composed of representatives from these railroads, and the adoption of these new automatic couplers, is due to the combined intelligence of these builders. The Master Car Builders, I understand, do not vote on any question of this kind until after consultation with the leading officers of the railroads.

Mr. Ely represents 3,000 engines in this country, which is the largest car manufacturing establishment in the country, all of which are now being equipped in this way. The difficulty with legislation is that you will retard the progress of these changes. In the meantime, if you arbitrarily say that a commission composed of John Smith and John Jones shall recommend to Congress, it will take two or three years to get their recommendation. By 1896, if the progress goes on without let or hinderance on the part of legislation, you will have automatic couplers on all these cars.

Now there is the danger. While we do not propose to obstruct or interfere with anything of the kind, we merely wish to show what we are doing, and where we will arrive by this legislation.

At 3:30 o'clock p. m. the committee adjourned until Wednesday, February 17, 1892, at 10 o'clock a. m.

WASHINGTON, D. C., February 17, 1892.

The committee met at 10 a. m., pursuant to adjournment.

Present: Senators Cullom (Chairman), Wilson, Hiscock, Chandler, Higgins, Harris, and Jones.

STATEMENT OF JOHN H. KING.

Mr. KING. Mr. Chairman and gentlemen of the committee: I have very little to say. You have already been told that our committee, which is composed of five members, has been unable to come to a conclusion as to what is best to be done.

Senator HARRIS. What is your committee?

Mr. KING. The committee appointed by the national railway commissioners convention, which is composed of the Interstate Commerce Commissioners and the railroad commissioners of the different States of the United States. This committee was appointed at that convention. Mr. Crocker is chairman, and Mr. Rogers, Mr. Hill, of Virginia, Mr. Smith, of Iowa, and myself, are members.

Mr. CROCKER. Will you allow me to make a statement?

Mr. KING. Certainly.

STATEMENT OF GEORGE G. CROCKER.

Mr. CROCKER. Mr. Chairman, the committee to which Mr. King refers is a committee appointed at a national convention of railroad commissioners a year ago, composed of five members, appointed for the purpose of drafting and submitting to Congress a bill with reference to securing the speedy adoption of driving-wheel brakes on locomotives, of train brakes on freight cars, and of uniform automatic couplers on freight cars. When that committee was appointed all the members of it were members of State railroad commissions. At the present time only two members of the committee are in office as members of State railroad commissions. A majority of the committee, therefore, are not railroad commissioners, and the three members who happen to be here this morning are the three members who are not now railroad commissioners.

The CHAIRMAN. Are you not still a member of the Massachusetts commission?

Mr. CROCKER. No, sir; I resigned on the first of January.

Senator HARRIS. You are all ex-commissioners, however?

Mr. CROCKER. Yes, sir, ex-commissioners. There was a question in our minds as to whether under the circumstances we ought to serve on the committee, but there was no way of filling the vacancy on the committee if we were to resign until after the next annual convention of railroad commissioners to be held some time in April next, and, after consultation with the members of the Interstate Commerce Commission, we came to the conclusion that it was our duty voluntarily to do what we could in furthering the objects for which we were appointed.

Shortly after the appointment of the committee, a circular was addressed to the railroad companies of the country asking for information upon the various subjects which were referred to the committee. The responses to that circular were received and digested through the kind services of Mr. Mosely, the Secretary of Interstate Commerce Commission, who also served as clerk of our committee. In November of last

year, a meeting was held in the city of New York, of which public notice was given, and at which railroad companies and railroad employes were represented. The committee heard all the evidence that was brought before it, and then went into consideration as to the form of bill to be submitted. When we parted in New York, we were unable to agree upon the form of bill.

Now I will state that the committee, organized in the way it has been, a member from Iowa, a member from South Dakota, a member from Virginia, a member from New York, and a member from Massachusetts, is one which it is difficult to bring together in consultation. It seemed that it would be too much to ask the committee to meet again in Washington for consultation and subsequently again for the hearing before this committee, and so arrangements were made with Mr. Moseley to get ample notice of the time when this committee was to get a hearing, and to arrange for a meeting of our committee immediately prior thereto for consultation. That has been done, and we had three members of the committee together yesterday. I regret to say that we have been unable to come to an agreement in regard to the form of bill to be submitted.

Do not, however, conclude that our failure to do so indicates any insuperable difficulty in the way of preparing such a bill. We have never been able to be brought together owing to our diversified residences. We shall submit to you certain bills which have commended themselves to one or more members of the committee.

Mr. Smith, of Iowa, has prepared a bill, for which he has gotten the approval in writing of one or two other members of the committee, which bill will be submitted to you for your consideration, with the letters indorsing it. Mr. Rodgers, of the committee, appeared before your committee last week. He happened to be in Washington at the time and presented his bill. Mr. King has a suggestion of a form of bill, and I also have a bill which I desire to submit for the consideration of the committee.

The question of what should be done as to hastening the adoption of the safety appliances upon freight cars has been under discussion for a good number of years by the conventions of railroad commissioners held in Washington, and also in State legislatures. The convention of railroad commissioners several years ago took the matter in hand and passed resolutions in regard to it, and resolutions have been adopted by various States in relation to it.

The three things which seem to be the most important are the application of driving-wheel brakes to locomotives. That is a question which concerns the safety of railroad travel, and is important because it is the application of brakes to a very large percentage of the weight of a train, the driving wheels being the means which are used to propel the train, and therefore being a very powerful instrumentality in stopping the train.

The next matter in increasing importance is the matter of the application of train brakes to freight cars. Our freight-car service is not only inadequately "braked" at the present time, brakes being on only half the wheels, but there are yet brakes which have to be operated by employes who travel over the tops of the cars and who are exposed to great danger from falling from the cars and also from overhead obstructions. Not only that, but the brakes can not be applied with the rapidity and the certainty which is necessary for reasonable safety in railroad traffic when our tracks are occupied, as they are at the present time, with a great number of trains and with little intervening time.

The power train brake, such as is used on the passenger train, can be applied to the freight cars, and when it is applied to the freight cars you will not dispense with the necessity of brakemen going over the tops of the train at that time. You will not dispense with the necessity of having brakemen on the trains or the necessity of their going over the tops of the trains at times, but you will largely dispense with the necessity of doing it under emergencies in the excitement of rushing from one car to another in ordinary cases. Therefore, both for the safety of passenger traffic and for the safety of employes on railroads, the speedy adoption of train brakes on freight cars is a necessity.

Now there is another and still more important feature which the committee of which I am chairman desires to bring to your attention in behalf of the convention of railroad commissioners, and that is the matter of couplers upon freight cars. There have been attempts for a good many years to devise automatic couplers for freight cars, and it is said that there are some five thousand patents of automatic couplers. There is practically no limit to the variety of automatic couplers which can be devised. There is a great number of these automatic couplers which will work automatically and safely with other couplers of the same description and of their same character. But when a coupler of one kind which is automatic is brought in contact with an automatic coupler of a different kind the automatic clutch entirely fails, and instead of having added safety there is added danger, because the two things do not go together properly. For instance, one form of coupler which is largely adopted on the roads in the United States (I mean the automatic coupler which is largely adopted on roads in the United States) is a vertical plane coupler, which is a coupler similar in form to the position of my hand [exhibiting to the committee] and works on knuckles like that [exhibiting to the committee]. When two couplers of that sort come together they clasp in that way [exhibiting to the committee]; but you take a coupler of that sort and bring against it a link and pin coupler and you will see the two couplers are calculated not to couple automatically. They will not do it. They are calculated more to smash each other. They are calculated to increase the danger rather than to diminish it.

With reference, therefore, to the question of couplers, there is a peculiar element involved in the problem, and that is that it is not sufficient for each road to adopt a form which is in itself good. It is necessary that each road and that all roads should adopt a uniform kind of coupler, or, in other words, couplers which will be interchangeable, which will work automatically with each other.

Now, throughout the United States there is a great diversity in couplers. They are of all sorts and kinds, and the brakeman never knows when he goes to a car what kind of a problem he has before him; and what we desire to bring to your attention is the importance of this problem and the reasons which we believe to exist why, with reference to these three matters, there should be Congressional legislation; why with reference to these three matters it is reasonable to break away from the general rule of noninterference with railroad companies in such matters.

In breaking away from these general principles we should break away from them just as little as possible. We should go only just so far as is absolutely necessary to accomplish the results which necessity compels.

Now let me give you some idea why this is an exceptional matter.

In the United States for the year ending June 30, 1890, 369 employes were killed and 7,842 were injured in coupling or uncoupling cars.

That is a total of 8,211 men killed and injured during one year in coupling or uncoupling cars, and in ten years that means a total of 80,000. That total means more than that, because last year the total was a thousand more than it was the year before.

The CHAIRMAN. How do you account for that, if you will allow me to ask you the fact? Is it because there are more miles of railroad, or more difficulties because of this mixtures of couplers?

Mr. CROCKER. More miles of railroad, more business being transacted, greater press in yard, and, in part, perhaps due to the mixture of couplers. On that point, however, we get no definite statistics, and that is merely a surmise.

In fact, there are certain indications in my own State of Massachusetts which lead to the impression that it may be that the danger of coupling a link and pin to a master car-builders' type of coupler, for instance, is so apparent and so great that the employé is on his guard and takes unusual precautions. It sometimes so happens in railroad matters that the most dangerous things are not the things that lead to most accidents, because the danger is so terribly obvious.

Now I say there were 8,211 killed and injured during the year ending June 30, 1890. The total number of employés killed and injured in all the various occupations in which they are engaged for that same year was 22,000. So that the number of employés killed and injured in coupling and uncoupling cars was over one-third of all the accidents which happened to employés in any way, shape, or form in their various forms of employment. It is more than two and a half times as many as the injuries happening to employés in consequence of collision, derailment, and all other train accidents. This one thing of couplers causes more than two and a half times as many accidents to railroad employés as collisions, derailment, and all other train accidents included.

So much for the coupler question by itself.

Now let me say one thing further in regard to that. All those 8,000 accidents, that vast number of accidents, can be practically eliminated from the list if we can get uniformity and automatic action in couplers. The number of accidents of that sort will be diminished to very trifling proportions.

Now we go to one thing further, and that is the accidents that are directly or indirectly connected with the lack of train brakes on freight cars. For the same year the number of persons killed by falling from trains was 561; injured, 2,363. The total number of killed and injured was 2,924.

From overhead obstructions, killed, 89; injured, 345. Total number killed and injured from overhead obstructions, 434. So that the total accidents from those two causes are 650 killed and 2,708 injured, or a total of killed and injured of 3,358.

Now that class of accidents will be largely diminished. It will not be so largely diminished as the other, but it will be largely diminished if freight cars are equipped with train brake apparatus. That class of accidents, 3,358, added to the 8,211 which result from coupling and uncoupling cars make 11,569 accidents resulting from those two causes, which is more than one-half of all the accidents which happened to employés in the United States during the past year.

Those proportions in my own State of Massachusetts are even larger than that, for the reason that Massachusetts is a terminal State and the dangers in freight yards are greater than they are in States where there is a through business. I think, therefore, I have given to the committee reasons why we believe that this is a matter which justifies somewhat exceptional treatment on the part of Congress.

On the other hand, it must not be understood that in placing these figures before you I am disposed to criticise the management of railroads upon this matter. The advance which the railroads of our country have made in speed, in comfort, and in safety has been little short of miraculous. But there is an apparent necessity of bringing about uniformity through some legislation upon this subject.

Senator HARRIS. How would you determine as to what particular coupler is to be the uniform coupler of the railroad system?

Mr. CROCKER. I was just coming to that. If you will pardon me, I will state that I was just going to strike that point. Now, I am very much opposed to any form of legislation enforcing the adoption of any specific coupler by name. I am very much opposed to Congress attempting to select a coupler, or leaving it for any commission to select a coupler, and it seems to me that such methods should not be resorted to, unless as the last extreme and only method by which the object can be accomplished. And the effort which I have made in drawing a bill upon this question has been to draft a measure which would leave it to the railroad companies of the country to determine what the form of coupler should be, and then giving to that form of coupler the authority of the United States as the standard for interstate traffic throughout the United States, and compelling the railroad companies within a reasonable time to equip their cars with the standard coupler so prescribed.

The CHAIRMAN. How long a time? Have you specified that in your bill?

Mr. CROCKER: Yes, sir. The first section of the bill relates to the power driving wheel brake.

On and after the first day of January, eighteen hundred and ninety-three, no common carrier subject to the provisions of the act entitled "An act to regulate commerce," approved February fourth, eighteen hundred and eighty-seven, shall put in use on its line in interstate passenger or freight traffic any new locomotive unless such locomotive is equipped with power driving wheel brakes.

SEC. 2. On and after the first day of January, eighteen hundred and ninety-five, no such common carrier shall use in hauling interstate passenger or freight traffic any locomotive which is not equipped with power driving wheel brakes so arranged as to be operated in connection with the train-brake system: *Provided, however,* That the requirement that the power driving wheel brakes shall be so arranged as to be operated in connection with the train-brake system shall not apply to locomotives used only in yards for switching purposes.

That is, it requires them on new locomotives to put a power brake on every one of them after the 1st of January, 1893, and to have all the locomotives equipped by the 1st of January, 1895.

The next sections, 3, 4, and 5, relate to train brakes.

SEC. 3. On and after the first day of January, eighteen hundred and ninety-three, no such common carrier shall put into use or haul or permit to be hauled on its line for the transportation of interstate freight traffic any new car belonging or leased to it, or any old car belonging or leased to it, which subsequently to the passage of this act has been sent to its shops for general repairs unless such car is equipped with brakes for each wheel and with train-brake apparatus of such a nature that the brakes can be set and released from the locomotive.

SEC. 4. On and after the first day of January, eighteen hundred and ninety-seven, any such common carrier owning or having in its control cars equipped with brakes and with train-brake apparatus as set forth in the preceding section sufficient in number to duly transport the interstate freight traffic coming to it from connecting lines may lawfully refuse to haul or to permit to be hauled over its line cars received from such connecting lines unless such cars are duly equipped with brakes for each wheel and with train-brake apparatus arranged to be operated from the locomotive and of such a character that it can be operated in connection with the train-brake system in use on its own cars.

SEC. 5. On and after the first day of January, nineteen hundred, no such common carrier shall haul or permit to be hauled on its line for the transportation of inter-

state freight traffic any car which is not equipped with brakes for each wheel and with a train-brake apparatus of such a nature that the brakes can be set and released from the locomotive.

We give, therefore, seven years and a half before the final accomplishment of that result shall be required.

The CHAIRMAN. As to brakes?

Mr. CROCKER. As to brakes; and in regard to that I may say that the application of train brakes to a freight car costs about \$50 a car. It means an expenditure on the million cars used in interstate traffic of \$50,000,000.

The CHAIRMAN. What proportion of the cars have them now?

Mr. CROCKER. Something over 100,000 are now so equipped.

The CHAIRMAN. What proportion are equipped with automatic couplers?

Mr. CROCKER. With reference to the car couplers there are about 110,000, apparently, according to the latest statistics, equipped. That is, according to the statistics of June 30 last. There were about 110,000 equipped with the master car-builders' type. There were about 60,000 equipped with other forms of automatic couplers, so-called, making 170,000, and the balance, 788,000, I think, were presumably equipped with the link and pin.

The CHAIRMAN. It was stated before the committee, I think, at the meeting a week ago, that there were from 140,000 to 200,000 equipped with car couplers, and that the party manufacturing these couplers was turning out about 30,000 a month, and it looked a good deal to the committee if that was going on at that rate they would get the couplers all on before any bill would be passed to that effect.

Mr. CROCKER. We know nothing, except the latest absolute information which we have is the information which was received in response to the circular of our committee which was sent to all the railroads of the country on the 30th of June last year, and there is no question but that there is a considerable progress in the matter of putting on the master car-builders' type of coupler—very rapid progress. On the other hand, some roads are changing from the master car-builders' type to other types, and some roads are putting on other types of vertical couplers or types of automatic link-and-pin couplers on new cars. They are putting them on at the present time, and the object of any bill which may be submitted is to bring about a determination of the question as to what shall be the standard couplers of the United States, so that this diversity shall not go on, and so that these roads shall not be going on in different directions and following different methods, according to the section of the country in which they may be located.

The CHAIRMAN. Please call the attention of the committee to the provisions of your bill which will regulate that feature.

Mr. CROCKER. That is in section 6—

On or before the first day of July, anno Domini eighteen hundred and ninety-three—

Now, in regard to this provision, I wish to say to the committee that I have endeavored to be very conservative; that I have endeavored to interfere as little as possible with the operation of railroads, while at the same time accomplishing what I believe to be necessary results.

On or before the first day of July, anno Domini eighteen hundred and ninety-three—

That is, a year from next July—

every such common carrier shall file with the Interstate Commerce Commission in Washington a statement certified to under oath by the president and clerk of the corporation as the action of said corporation through its board of directors, setting

forth such details in form, size, and mechanism as it deems essential in every freight-car coupler in order to insure requisite conformity, requisite automatic action, and requisite safety in service, and also stating the number of freight cars owned by it and under its control, and also the number of other cars under its control by lease on the thirtieth of June, eighteen hundred and ninety-two, exclusive of those used solely for State traffic. Such statements shall be made upon blanks to be provided by the Interstate Commerce Commission, and the determination of such commission in relation to the validity of the several statements received shall be final. If upon examining the statements so received said Interstate Commerce Commission is of opinion that companies owning at least sixty per cent of the freight cars owned and controlled as aforesaid by companies which shall have duly filed statements as aforesaid have agreed upon such details of freight-car couplers in form, size, and mechanism as will insure requisite conformity, requisite automatic action, and requisite safety in service, said commission shall thereupon declare and publish that couplers complying with such details so agreed upon shall thereafter, until otherwise ordered, according to law, be the standard couplers for use in the freight-car interstate service.

SEC. 7. After the expiration of six months from the publication of such declaration by the Interstate Commerce Commission no common carrier subject to the provisions of the aforesaid act to regulate commerce shall put into use for the transportation of interstate freight traffic any new car belonging or leased to it or any old car belonging or leased to it which subsequently to said date has been sent to its shops for general repairs unless such car is equipped with standard couplers prescribed as aforesaid.

SEC. 8. On and after the first day of January, eighteen hundred and ninety-seven, any such common carrier owning or having in its control freight cars equipped with standard couplers prescribed as aforesaid sufficient in number to duly transport the interstate freight traffic coming to it from connecting lines may lawfully refuse to haul or to permit to be hauled over its line freight cars received from such connecting lines unless such cars are duly equipped with such standard couplers.

SEC. 9. On and after the first day of January nineteen hundred, no such common carrier shall haul or permit to be hauled on its line for the transportation of interstate freight traffic any car which is not equipped with standard couplers prescribed as aforesaid.

SEC. 10. An employé of any such common carrier who may be injured by any locomotive or car in use contrary to the provisions of this act shall not be deemed guilty of contributory negligence in consequence of continuing in the employ of such carrier after the unlawful use of such locomotive or car has been brought to his knowledge.

The CHAIRMAN. Suppose that that sixth section is not complied with by the agreement of 60 per cent of those representing cars, how do you bring them together after that?

Mr. CROCKER. The sixth section, as you will see, is drawn in this way, that if 60 per cent of those should make statements. It will not be safe for the railroad companies not to make general response to that circular. I think it is a simple and very effective way of bringing about the result.

Senator CHANDLER. If 60 per cent do not, then your sixth section does not take effect?

Mr. CROCKER. If it should be that 60 per cent would not agree, then the object to be accomplished would not be reached.

Senator CHANDLER. Sections 6, 7, 8, and 9 depend upon the agreement of 60 per cent of the companies.

Mr. CROCKER. Yes, sir. The fact is that the companies will agree, they will be compelled to agree under that, because they will not be willing to leave the possibility of the standard coupler to be determined against their interests. One side or the other is going to come down to two forms—

Senator CHANDLER. Suppose the railroads really do not want any legislation upon this subject (and we see no evidence that they do) it is perfectly possible for the railroads to paralyze these sections by adopting a different style of coupler. The Pennsylvania system would adopt one style, the New York Central would adopt another, and the Baltimore and Ohio another, etc. Then the law is nugatory.

Mr. CROCKER. Yes; if they should do that.

Senator CHANDLER. We simply legislate ourselves into their hands, and all this class of people you want to protect we deliver over to the railways and say, "Now, you do not want any legislation, but here is some, and whether it is especially effective or not you may decide. If you will agree, then the law is in force and it is penal. But if you will manage to differ your law is gone." Is not that the effect of it?

Mr. CROCKER. Yes, sir; that is exactly it. But will they take that position? In the first place, it is going to be a very great advantage to them to have a standard form of coupler prescribed in this way. It will be an advantage to them in matters of expense, because their couplers will not be broken up by couplers which come in contact with them which are not fitted to couple with them. It will be an advantage to them in the matter of damages, because they will when they do get this uniformity which they all desire—I know they all desire it—when they do get this uniformity the amount of injuries will be very greatly increased, and if they do not have this uniformity they will have to pay for the injuries which ensue.

Then still further, and most important is this, that the railroad companies of the country do not want Congress to interfere and prescribe the forms of couplers which they shall use, or any form of safety appliance. They do not want to drive Congress or the people to any measures which look toward nationalism. They do not want to be before the people in the position of being unable to agree among themselves, and being therefore in a position where the Nationalists shall say, "You have proved that you can not run interstate railroads satisfactorily yourselves because you can not agree. You have had ample opportunity to come to an agreement. You have thrown that opportunity aside and now is the time when you have forced Congress to make good for your own deficiencies and your own inability to come to some understanding."

Now, gentlemen, it is possible to draw a bill much more stringent than this. Bills have been drawn which are much more stringent than this, but the question is, can those bills pass Congress? It is better to have this than it is to have nothing, and it seems to me that every element of self-interest will lead the railroad companies of the country to adopt this opportunity of determining for themselves what their standard shall be, and having it approved by the authority of the United States.

Now one question will occur to your minds probably which ought to be provided for in the bill, and that is this: That if they should agree upon a standard form of coupler, the persons who might be the owners of inventions involving those details agreed upon might be in a position to charge an exorbitant price for their inventions, and I think a clause should be inserted in the bill to this effect before the clause "said commission shall thereupon declare," "and if said commission is satisfied by bond or otherwise that the royalties to be charged for any invention involved in the details as agreed upon as above shall not exceed a sum per coupler which shall be reasonable."

Then it may prescribe them as the standard coupler that will force everybody into an agreement as to the amount to be paid for the coupler. And one thing further in the bill ought to be amended, and that is before the words "in form, size, and mechanism," "setting forth such details with reference to height, form, size, and mechanism as it deems essential." The matter of the height is a thing which is very important and which should be definitely stated.

I will submit to the committee later a draft of the bill with these corrections made so that they may have it in correct form.

I desire simply to say in regard to this that this is a mere suggestion coming from me and not in any way as representing the committee of which I am a member. Other members of the committee have and will submit to you drafts of bills which conform to their idea.

At the last session of the Massachusetts legislature, impressed with the great number of accidents which happened in that State and throughout the country from these causes, some resolutions were passed and a committee of three, consisting of one on the part of the senate and two on the part of the house, was appointed to appear before Congress and present the resolutions and to urge the passage of a bill, and that committee are here present.

The CHAIRMAN. Gentlemen, I think it will be necessary for the committee now to take a recess and the hearing will be resumed, I should say at half past 1 o'clock.

Mr. HAINS. Mr. Chairman, may I say a word?

The CHAIRMAN. Yes, sir.

Mr. HAINS. I appear here for the railroads in this case. I am vice-president of what is known as the Plant system of railroads in Georgia, South Carolina, Florida, and Alabama. I am also here as the president of the American Railroad Association. I do not wish to take up your time just now, but as you have not probably had a chance to hear what I do not want to call the railroad side of the question, or the railroad statement of the question, I hope we may have an early opportunity to be heard after the recess, as I and my colleagues have come here at considerable inconvenience to our business.

The CHAIRMAN. The committee will hear the gentleman after it resumes its session this afternoon.

Mr. MELLEN. Mr. Chairman, I will say that there are two or three delegations from Massachusetts. Mr. Crocker represents the Railroad Commission. Then there is a gentleman who represents the legislature of 1891 and the resolutions that were sent to Congress on the subject-matter that you are considering. There is another committee representing the legislature of 1892. You have heard the Railroad Commission in the person of Mr. Crocker. The two committees from Massachusetts will be pleased to be heard this afternoon.

The CHAIRMAN. We would be glad to have you gentlemen consolidate what you have to say, and have one or two men of each committee, if possible, address the committee.

Mr. MELLEN. I desire to suggest right here that this is the outcome of an agitation that was started by some members of this committee who are here to-day, and that side of the question which represents these thousands of men who are maimed and killed would like to have a fair show to present their case.

The CHAIRMAN. They certainly shall have a fair show, so far as this committee is concerned.

Mr. HAINS. If you will permit the railroad statement of the question to be made immediately after recess, in which I will endeavor to be as brief as possible, perhaps you will find that much unnecessary argument will thereby be done away with, because we shall probably suggest a great many things that will assist you in coming to a conclusion.

At 12 o'clock m. the committee took a recess until 1 p. m. At the expiration of the recess the committee resumed its session.

STATEMENT OF H. S. HAINES.

Mr. HAINES. Mr. Chairman and gentlemen of the committee: I appear before you to-day on behalf of what is known as the American Railway Association, an organization of the railway corporations of this country, with a mileage of 122,000 miles out of perhaps one hundred and seventy-odd thousand miles that there are in this country. I am personally connected with what is known as the Plant railroad system, a system of railroads in South Carolina, Georgia, Florida, and Alabama. I am the vice-president of that system, having been at times superintendent, chief engineer, and general manager.

The association for which I speak has a definite purpose. Its purpose is the development and the solution of problems connected with railroad management, and it would therefore seem eminently proper that in a question of the character you have now under consideration, this particular association of railroad corporations should be heard with reference to what is confessedly a most important problem connected with railroad management.

This association will perhaps be more familiar to you under its former title of general time convention, under which title it succeeded in establishing in this country what is known as standard time. It has also established a uniform set of hand and lamp signals for the use of train men, and also a uniform code of train rules, and we shall hope before we get through with this question that probably we shall have contributed something to the solution of this problem also.

I am here with some of my colleagues at the request of our executive committee, which is composed of Mr. Royce, general superintendent of the Chicago, Rock Island and Pacific Railway; the general manager of the New York, New Haven and Hartford; the vice-president of the New York, Lake Erie and Western; the general superintendent of the West Shore, and the general manager of the Chesapeake and Ohio. I only mention this to show what a representative body we are.

The CHAIRMAN. Are the switchmen represented?

Mr. HAINES. No, sir; we represent the railroad companies.

The CHAIRMAN. We are anxious to hear somebody who represents the men who are engaged in this work.

Mr. HAINES. Our executive committee is composed of representatives of the following roads: Chicago, Rock Island and Pacific; New York, New Haven and Hartford; Louisville and Nashville; St. Louis, Arkansas and Texas; New York, Lake Erie and Western; Lehigh Valley; West Shore; Chesapeake and Ohio, and myself, representing the Plant system. I mention this to show that it is a representative body, a body which represents pretty well the railroad interests of this country.

I will say to you, what you will probably be pleased to hear, that we have not come here to antagonize anybody. In fact, we know from what we have been able to gather, that we are on a line, and the same line, with what has been attempted to be accomplished by the committee on safety appliances of the convention of railroad commissioners and what is the desire of the several associations of railroad employes through their representatives.

I have said that perhaps it may be pleasant for you to hear that we are all in one line as to what we desire to accomplish. If there be any difference between us, it is a question as to which of the measures which we will submit for that purpose will best succeed in accomplishing the purpose which we all have in view.

I propose now, simply to state a few matters of fact. I will state that I am and have been vice-president of this association, and some years ago we established a committee on safety appliances. The purpose of that committee, which is a standing committee, is to consider all matters of safety appliances, the successful operation of which depends upon the united action of the railroad companies. We do not undertake to consider isolated matters, but only those for which united action is necessary. Among the first we took into consideration was that of safety appliances. We have, as I say, a standing committee on that subject, composed, at the present time, of the president of the Fredericksburg and Potomac Railroad, Maj. Myers, who is with us here; the general superintendent of the Fitchburg; a representative of the Delaware and Hudson; Mr. Ely, general superintendent of motive power of the Pennsylvania Railroad; Mr. Merrill, the general manager of the Chicago, Burlington and Quincy; Mr. Odell, who is here, general manager of the Baltimore and Ohio; Mr. Fillmore, general superintendent of the Southern Pacific Company; Mr. Whitman, general manager of the Chicago and Northwestern, and Mr. Hammond, superintendent Boston, Revere Beach and Lynn Railroad. This is the standing committee which has this matter in hand.

We took up this question of couplers, which had already received the attention of what I may call the technical part of our railroad service; that is to say, an association of the master car-builders of the railroad companies, not a voluntary association, but just as we are, an association representing the railroad companies. That association took up the matter of car couplers some years ago, and after a good deal of consideration, in which there was brought under their notice every variety of coupler that was known in this country, either practically or, I may say, theoretically, they came to the conclusion that the course which had been pursued successfully with reference to coupling passenger cars was the course which should be pursued with reference to the coupling of freight cars, and that the same principle which had been adopted in the one should be adopted in the other. But the couplers in use on passenger cars, which have become generally in use, much more generally since they took this action, what we call the vertical hook type of coupler, was a very expensive device, too expensive to be used on the large number of freight cars that there are in use in this country, and they devoted themselves to cheapening that device so that it would come within the reach of our requirements for freight-car service.

They did not undertake to establish a coupler; they undertook to establish a principle to which all couplers should conform. That was that they should be mutually interchangeable, never mind whatever might be their details, that they should couple with each other. That left it to the well-known ingenuity of the American inventor to exercise his powers in any direction he pleased, provided he conformed to that one principle. The success which attended their efforts in that direction seemed to be such that when it was brought before what I may call the body of managers of railroads of this country it was referred to its committee on safety appliances, and that committee, after careful consideration, a year ago last October, made a report to the semiannual meeting of the American Railway Association, in which they recommended that the companies, members of this association, should thereafter conform to the vertical hook type of coupler, what was known as the master car-builders' contour lines, in all new constructions.

That was discussed in open meeting of the association, and it was

adopted with but two dissenting votes. I will state that one of the railroad companies that voted against it has since adopted that idea and that principle.

Now, that is where we had brought it up to October, 1891; that is, that these couplers, of whatever patent they might be, should conform to a certain principle which I will not undertake to elaborate here. It is sufficient for me to say about that that any coupler that conforms to that principle must interchangeably couple with every other coupler that conforms to that principle.

You have had before you some statistics on this subject. They date back so far that we consider them not reliable to use before you. We have, therefore, through our own organization, obtained more recent information, which brings it up to about the first of the current month. The information which you have before you, which has been noted, is up to the 30th of June, 1890. That information is to the following effect: For the year ending June 30, 1889, there were 80,000 what are called automatic couplers. On the 30th of June, 1890, there were 115,000 automatic couplers. In this are included certain couplers that would not have come under our prescribed rule, because they were not mutually interchangeable, but they called them automatic, because they would couple among themselves. The first statement included passenger-car couplers as well as freight-car couplers, and they show that there were at that date 88,000 cars equipped with freight-car couplers which they called interchangeable.

I will show you now what is our record of what we call the master car-builders' couplers, which are mutually interchangeable. I will state that we have 171 corporations members of this association. We had only obtained at the time we made up this statement, which we had to make up rather hurriedly, reports from 91 members. These 91 members have about 700,000 cars at the present date.

These 91 members, with a mileage of about 75,000 miles of railroad, had in use on January 1, 1887, couplers of the kind I am speaking of, mutually interchangeable, on 6,300 cars. In January, 1888, they had 11,000; in January, 1889, they had 22,000; in January, 1890, they had 47,000 cars equipped with the master car-builders' coupler. In October, 1890, our association adopted this principle.

On January 1st, 1891, we find that the cars equipped have risen from 47,000 to 84,000. On January 1, 1892, they had risen to 134,000, and the latest statistics we have, coming up to about the 1st of February, show that there are about 136,000 cars belonging to these 91 railroad companies, with a mileage of 75,000 miles and freight cars of about 700,000 in number; that is, about 20 per cent of their total freight cars were equipped at that date with what we call the master car-builders' type of coupler.

Senator HARRIS. Does that include passenger cars?

Mr. HAINES. No, sir. I understand that we are speaking now of freight cars.

Now, that is not all. We have gone a little further and we have undertaken to ascertain from our members what they are doing about their new equipment. It has so happened that the company which I represent, which has a mileage of between 1,300 and 1,400 miles of road, has never used a vertical hook type of coupler in its freight service, but since the 1st day of January we have made a contract for 1,000 cars to be fitted in that way.

What are the others doing? We find that these 91 companies have now under construction 26,000 cars with this style of coupler, and I am

told by the car-builders of this country, a number of whom I have seen recently in connection with this subject, that it is the rule since the action taken by the American Railway Association that the cars ordered shall be equipped with the master car-builders' type of coupler.

Now these are facts, gentlemen, and they are fresh and they are authoritative. They come from the best sources that we can have, from the managements of the railroad companies themselves, reporting to their own organization.

Now I have said what is the situation to-day with reference to the adoption of a uniform type of coupler, and I think I have brought it to a point at which we can now begin to discuss another aspect of this case, and that is as to the legislation with reference to this matter. I understand the tendency of this legislation to be of a most laudable character and one in which we are entirely in accord, and that is that this committee desires to consider the proposed bills before them with reference to the safety of the men who use these couplers. That is the aspect of the case to which I propose to refer—the possibilities of legislation. It is not a question as to whether we should have a uniform coupler or not. The question is whether we shall have that kind of a coupler which will protect men's lives and protect them from personal injury, and that is the yardstick that is to be applied to all proposed legislation.

I have read the various bills that have been before us. I have seen those which have been presented and considered by the Senate committee, and I have tested them by that yardstick, as I have called it, and that idea is not dominant in any of these attempts to prescribe the kind of a coupler. They attempt to pick out automatic couplers and interchangeable couplers and uniform couplers. In the first place, there is no such thing as an automatic coupler. We do not want one. If you mean by "automatic" a thing which will act without the intervention of human agency, we certainly do not want that kind of coupler. It is all right for the cars to couple when you want them, but you do not want them to couple when you do not want them to do so. Of course, it is all right if they should uncouple when you want them to. What we all want and what the representatives of these employes want, what the committee on safety appliances of the State railroad commissioners' convention want and what this committee wants is a coupler which can be used without danger to the life or to the limb of the man who manipulates it.

The CHAIRMAN. What is that?

Mr. HAINES. That is exactly the test that I think all of us want to apply, and we have got a little confused on "automatic," "interchangeable," "uniform" couplers. I claim, gentlemen, that so long as we provide a coupler which can be manipulated without injury to the person manipulating it that is all you ask, and that is the only kind of legislation which from the moral standpoint you can fairly ask, because if you are going to go farther, if you are going to undertake to prescribe mechanical devices, if you, as I say, attempt to prescribe uniformity, it is death to progress. If you are going to petrify the art of railroad invention at the spot it is now, what will be the result? What would have been the result if a few years ago you had stopped the progress of invention on air brakes when we had the first Westinghouse brake? When the Westinghouse brake was first applied the president of our company came to me and said, "That is what we have been wanting. Let us put it on." I said, "No. It is in its experimental stage. Let us wait. If you will wait a little while you will see something come

out of that which will be very much better, and you will be sorry that you have ever adopted this."

What was the result? Westinghouse's first brake was limited in its application. He had not experimented with it long before he found that he could so improve it that it was bound to act under any and all circumstances even if the train parted, and those who had taken his first brake had to throw them away and reëquip their passenger trains.

That is what you will do if you take and petrify the condition of the art of railroad couplers at the point that it is now. You will prevent that well-known mechanical ingenuity of this country from improving on what we have now. I ask you in their behalf as well as in our own that you shall not do that, which would simply apply that system to the couplers you have.

Gentlemen, there are, as you have heard 5,000 different patents for couplers, and when you think of that you say to yourselves, "How, out of this vast number of couplers, shall we attempt to pick one?" If you made the effort you would have not only those 5,000 inventors dead against the thing, but you would have the 10,000 more who think they can invent something better.

We have not done that. We have prescribed the principle for uniform couplers; that they shall be mutually interchangeable and uniform only as to a certain principle. That excludes all other couplers, I am told, but about four or five hundred patents. What difference does that make? I will show you two couplers which are as different as they can be so far as their patent's relations are concerned, and yet they will couple together without the slightest trouble. [Exhibiting couplers to committee.]

I am going to show you where the difference is. They will couple [exhibiting and explaining coupler to committee]. You see they are of entirely different patterns, and yet they will couple here because they conform to that principle that I have told you about; that is, they have certain ideas which are essential to their being mutually interchangeable. Every one of the five hundred will do the same thing. Where do they differ? They differ with reference to the locking device. That is all. I will show you another one and show you what it is that it is necessary for the man who is coupling to know, what he wants to be able to do, to stand outside of one car and manipulate that locking and unlocking device. This is but a small sample of the device. If this were the same size it would lock with ease. What the man who manipulates the coupler wants is that every coupler, never mind what it is, shall have what we call the release rod, that controls the locking device, so arranged that he can stand outside of that car and operate it.

The CHAIRMAN. And the unlocking device.

Mr. HAINES. That is all the same. So long as that is the case, so long as he knows that he can go to the same place, and that a place of safety, and find that rod always there at the same place and he performs the same manipulation, what does he care whether the unlocking devices and the locking devices are the same? What does he care? It does not concern him. If he can stand right outside of the car and put his hands right there [indicating] and find that rod and turn it and unlock that coupler, that is all he cares about.

Now, I hope that I have contributed something towards a solution of this problem, which seems such a terrible one. It is just this, that so far as you are concerned in the interest of humanity, so far as we are all concerned, so far as the gentlemen who represent these associations of railroad employes are concerned, what they ask of us in this connec-

tion is that they shall be able to conduct their ordinary work in safety to themselves. If they are able to do that they do not care what device we use; it is none of their affair; they do not care, if we will just give them a safe device, so that they will know, whether it is dark or raining, when they go and stand in that place, and that a place of safety, that they shall find a rod that they can put their hands on and uncouple that car.

The CHAIRMAN. Do I understand you to say that you are in favor of legislation on the subject?

Mr. HAINES. I am coming to that, whether it is necessary or not. Following that rule all the time, what can you gentlemen do to assist all of us in promoting this thing that we all have at heart, the speedy adoption of couplers that will be safe to manipulate?

Now I have told you what the railroad companies have done. The drawing which I have here is not large enough for you to see it at this distance. If you gentlemen will just notice that, you will see with what an accelerated ratio this work is going on. [Exhibiting map to committee.] I tell you that to-day over 20 per cent of the cars of this country are equipped with a coupler that is mutually interchangeable, that has a release rod, where a man can stand on the outside of the car and handle it without danger to himself.

Now your minds will naturally revert to the statistics that have been placed before you with reference to the injuries, some of them mortal, that these men have received in coupling.

The CHAIRMAN. In making the change from the present condition to the kind of couplers you would adopt, what would be the result on the people engaged in the business?

Mr. HAINES. I am coming to that. You will notice all these devices. There is a slot made in the knuckle here [exhibiting]; that is made to couple the cars if they are fitted with a link and pin, and I assert that it requires more caution, greater dexterity, to couple a link-and-pin coupler to a coupler of this pattern than to another link-and-pin coupler.

We are in a transition period. We are passing from a coupler which is confessedly a dangerous one to a coupler which we assert to be entirely safe with the appliance of a release rod standing outside to control the locking device. In passing from one to the other during this period I am of the opinion, and I share this belief with those who are engaged practically and come in daily connection with this matter, that there is an increased danger until the time 50 per cent of the cars are equipped with what we will call the master car-builders' type of coupler. When you reach that point you will find more cars coming together with this coupler than with a link and pin and this coupler. From that time on the number of dangerous couplings will decrease until finally the old link-and-pin coupler will have disappeared from use altogether.

That has been accomplished in other things in this country. Those who have been familiar as I have been for twenty-odd years with the progress of railroads—I have been in the business ever since I was 16 years old—have seen many great changes brought about by the larger lines, the trunk lines, in our country using uniformly the same devices, and the other lines have fallen into line. They had it to do. They have done it, many of them reluctantly, but the pressure brought to bear on them by the principal lines was so great that they could not carry on their business without conforming to the more advanced requirements on these other roads. That is just what is taking place with this coupler question. The great roads of the country are not only

having their new cars equipped, but they are making it a rule that every car that comes into the shop for general repairs shall be equipped at both ends with one of these several patents, all of the same type, and all interchangeable. That work is going on on the Pennsylvania, on the Central, on the Erie, on the principal Western systems; it is going on so generally that the time is going to come when the railroad companies themselves will insist that they will not accept a car that is not provided with one of this type of couplers. They have not gotten to that point yet. They have, as I have told you, only 20 per cent so far. There are about 1,100,000 cars in this country, and we think on the basis of those roads which have reported to us that there are perhaps 220,000 out of that 1,100,000 that are equipped with these devices.

It is a still more important point for you to bear in mind that the new cars are almost without an exception being equipped in this way. You may find 500 cars here or 500 there that are not, but I tell you that there are 26,000 cars that are reported to us as being under construction to-day which are being equipped with these devices. I am only showing you how the railroads are solving this problem for themselves and how they will solve it at an accelerated ratio.

Suppose we admit that the people representing the railroad companies appreciate the responsibility of their positions, what is due to their employes as well as the railroad companies, and that they are going along with this work on the right line, what can we do to help along?

The idea seems to be that we can be helped in this matter—I am speaking of the American Railway Association, which is on record as wanting its members to do this thing, by a vote in which there were only two negatives—what can you do to help us in this matter? I will tell you what fixing a date at which something shall be done, and nobody knows what it is, would do.

The CHAIRMAN. Suppose we were to fix a date that this device or idea that you have elaborated here shall be adopted by the railroads of the country, and that thereafter no cars shall be used in interstate traffic unless they are so equipped?

Mr. HAINS. You have not done that so far.

The CHAIRMAN. That is what we are talking about.

Mr. HAINS. I want to show you now what has been the effect. There is a feeling abroad among railroad managements that Congress feels impelled to do something, and that something will be to pick out from among the 12,000 couplers some one, and say thus far shalt thou go and no farther. I do not say that is a correct impression, but that is the idea that has got out.

Now, what has been the effect on the part of those railroad companies who are rather reluctant to fall into line? I had a gentleman call on me the other day representing a very largely used coupler of this type who had been in the State of Ohio attending to his business in introducing his wares there. I asked him how he made out. He said he felt discouraged; that so far as the lines were concerned, the through lines that ran across the State of Ohio, they were of course putting on the couplers; but the local railroads in the State came to a dead halt, and they are afraid to do anything. They are afraid that whatever they do—if I present my device to them they say, how do I know after I get my cars fitted up in that way that Congress will not say we shall use some other coupler?

Now, when you bear in mind that there are \$25,000,000 involved in this question, you can see how important it is to a man who is responsible to the stockholders for the expenditure of their money, and the

great trouble has been that they do not know what you are going to do. They are afraid you will do something different from what they are doing now, and it is an excuse in a great many instances for doing nothing.

That paper which I presented will show that very thing. It shows from the 1st day of January that lines which were progressing upward at a pretty good rate seemed to have halted for a while. It seems to have had that effect. I do not assert that. That conclusion might be drawn from it, but what I told you as to what occurred in the State of Ohio was information given to me from a reputable man.

Now you ask me, "What can you do to help us in this?" It seems to me, if I have stated my case clearly, that we are solving this question so rapidly that before any date that you could fix, even though you accepted this very device here, if you said as the gentleman did this morning (I think Mr. Crocker allowed about seven and a half years), if I thought we were all going to wait seven and a half years before we solved this problem, I should feel more discouraged than I now do.

The CHAIRMAN. Is it your judgment that all the railroad cars of the country will be furnished with automatic couplers, or couplers of some sort to be used interchangeably?

Mr. HAINS. It is always dangerous for a man speaking in a representative capacity to state an opinion. I have endeavored so far to confine myself to facts and what might be logically deduced from those facts.

Let me state now what we have done in the matter of couplers in passenger-train car service. We first had what we call the Miller coupler. We now have what is known as the Janney coupler, which type has proved to be much superior, so much so that it grew and kept growing, until to-day the principal lines of this country that are using the Miller coupler are preparing to throw it off of their trains and adopt such a coupler as will couple with the rest that we have. You may say to-day it is substantially the fact that the entire passenger equipment of this country is equipped with that device.

Senator WILSON. Why would the fixing of a type tend to obstruct your progress toward the adoption of such couplers in the intermediate time?

Mr. HAINS. The first thing would be that it would be a very serious matter, I suppose, rather a difficult matter, for you to attempt to prescribe this type of coupler without its meeting with a good deal of opposition from those who do not want that type.

Senator WILSON. Suppose we did not prescribe any particular type, but left that question to your action, only holding you responsible for the adoption of something which would insure safety?

Mr. HAINS. That would be entirely agreeable to those of us who are on that line already. But what would be the effect of those who have not advanced quite as far as we have?

Senator WILSON. Would it not in that case have the effect of hastening their action?

Mr. HAINS. Suppose you suggest, as the gentleman proposed this morning, five or seven years. I am afraid such is human nature that those who are reluctant to be pulled up to the place where we are would set back and say, "We have five years yet in which to settle this matter. We are not going to settle it this year." But I tell you, gentlemen, that as soon as the principal lines in this country get their own cars sufficiently equipped with this device, which they will—they are doing it now—it will have a ruling effect upon the other roads, and the difficulty of having

link-and-pin couplers mixed up with them will be so great that they will insist that they will not accept a car which will not couple with this without any intervention of a man having to go inside between the cars to perform that operation.

Senator WILSON. Unless there should be some rule of public policy adopted, how could some of those companies refuse to take a car not thus provided which was in the interstate-commerce service?

Mr. HAINS. Well, I do not like to quote a trite saying, but it occurs to me about Columbus and the egg. The fact is that it is done to-day. I do not know whether it is done lawfully, but yet it is a fact.

Senator WILSON. I am speaking of it from a legal standpoint.

Mr. HAINS. I am giving you a practical reply. I am not a lawyer. To-day the railroad companies say, "We will and we won't take this car, and we will and we won't take that car. We prescribe certain rules, and if the car does not come up to that requirement we will not take it."

The CHAIRMAN. Is that because of a question of safety in coupling the cars?

Mr. HAINS. Yes, sir; and if a car comes to them that they think is not safe they will not take it.

The CHAIRMAN. If it is not safe they are not required to.

Mr. HAINS. Suppose it should be said, You shall not determine this question of safety or not safety? I will tell you that the railroads on the Pacific Slope will not take a car from any of us to-day that does not have an air brake on it.

The CHAIRMAN. All that is settled now.

Mr. HAINS. I do not know of any railroad company that has made it a legal issue. I have not said much about the question of air brakes because the burning question is the coupler.

The CHAIRMAN. They both burn a little.

Mr. HAINS. Yes, sir; I am prepared to say the same thing about the air brake. We have not got as far along with air brakes as we have with the coupler question. There are mechanical difficulties to be overcome yet in the use of air brakes on long freight trains that have not been solved. I will state that I think this matter has passed the experimental stage, so far as the type or principle involved is concerned; so that when you take up the question of air brakes you have yet to solve a mechanical difficulty, and that is the use of air, which is the principle which we all seem to have agreed upon among ourselves—the use of air in the application of power brakes upon a long train of freight cars. That question is, as I say, in the experimental stage, and yet I am prepared to show what progress has been made on that subject also. I myself must confess that I expressed a little surprise when I saw how much had been done. This very paper which I have here shows on this line what has been done in that direction.

The CHAIRMAN. That all seems well to a man who looks at that paper, but you can not tell what is on the paper by reading your testimony. I wish you would state it so that it will appear in your testimony.

Mr. HAINS. Very well. The present condition of freight cars in service fitted with air brakes is such that there were about 103,000 cars so equipped on the 1st day of January, 1892. Of course that means freight cars. There are about 18,000, out of the 26,000 which are under contract to be fitted with air brakes, I mean, which are to be fitted with this type of coupler. Of that 26,000, 18,000 will be equipped with air brakes. Now, it seems to me that that work is progressing as rapidly as could be expected, until we shall have solved the problem of using successfully compressed air on long freight trains. There have been

recently some very careful and extended experiments made by the Chicago, Burlington and Quincy Railroad with reference to the use of different kinds of air brakes. There has come up the question of interchangeability. Then the question was whether they could use different patents of air brakes mixed up together satisfactorily. This is to be solved yet.

As to the third point which has been made, as to the use of power brakes on engines, I will state that nobody thinks of building an engine without putting power brakes on it. We would not have one without power brakes. We are putting them on all engines, even the switching engines which are provided for in this bill. That question is taking care of itself.

There is evidence in here that there are now some 17,000 engines with power brakes applied to the driving wheels.

The CHAIRMAN. Is there anything further you wish to say?

Mr. HAINS. There is one other thing I would like to call attention to, because it is corroborative of what I have stated here. It is the matter of curing the evils in railroad management of this character by legislation.

I quote from the Engineering Journal of December, 1891, page 535. Here is an article on the very question of car couplers, and they quote such parts referring to that legislation as summed up by Mr. Thomas Farrer, permanent secretary to the British Board of Trade, in giving his evidence before a royal commission appointed to inquire into the causes of accidents on railroads.

He says:

But after all these admissions, general interference with the administration of railways is objectionable on the following grounds:

By such interference you are setting two people to do the work of one. Double management is notoriously inefficient. One bad general is better than two good ones.

You set those who have less experience of management and less personal interest in the result to control those who have more.

Control is either apt to become formal and a sham, or if zealously and honestly exercised, to be rigid, embarrassing, and a hindrance to improvement.

Many excellent things, the adoption of which is desirable for public safety, *e. g.*, the block system, interlocking points and signals, efficient brakes, properly constructed ties, are not things which can be once for all settled, defined, and prescribed, but things of gradual growth, invention, and improvement. Had any of these been prescribed by law at any past time they would probably not have been what they are now, and were they now prescribed and defined by law future improvement would be checked. This is a most insidious form of evil, for we do not know the good which we thus prevent. It is no answer to say that Government control would be intelligent and would encourage improvement. It is not Government or its officers who invent and adopt inventions, and those who do so are far less likely to improve when Parliament or Government has defined and prescribed a definite course, the adoption of which frees them from responsibility.

The CHAIRMAN. Have you anything further to say?

Mr. HAINS. No, sir. I believe I have concluded, unless my colleagues would like me to make any other suggestion. Mr. Meyers is the chairman of our committee on this particular subject.

Mr. MELLER. I would like to inquire if it is the rule of this committee to hear the opponents of a measure before the friends of it have an opportunity to present their side.

The CHAIRMAN. The gentleman who has been talking indicated this morning that his remarks would probably remove the necessity of statements on the other side.

Mr. MELLER. If I understand the tenor of his remarks he is opposed to doing anything, hence he is opposed to our proposition.

Mr. HAINS. I believe I am through unless you would like to ask me some other question.

The CHAIRMAN. I know of nothing further now.

STATEMENT OF WILBUR H. POWERS.

Mr. POWERS. Mr. Chairman, I fully appreciate the needs of the hour. You have but little time and I do not desire to take much of it, and I shall endeavor to keep that promise fully as well as those who have preceded me.

It seems to me that there is an evil; that it is admitted; that there is no question upon that point upon which anything need be said.

The question is the remedy. I am not here to go into any particular system or to discuss the question, as I understand it, of car couplers from the standpoint of the mechanic or anything of that kind. But I am here to represent the sentiment of Massachusetts upon the subject of legislation.

The remedy has been attempted in our own State. From time to time there came before the railroad committee representatives of the employes of railroads and the railroad commissioners, and those who are interested in this general subject, who ask us for legislation. Our reply to that is, or has been heretofore, usually that it is of little use for the State of Massachusetts to pass legislation relating to this subject, because, while we might legislate another State might not, and therefore very little good would be done.

Now it would seem to us that something ought to be done, and that that something ought to be done by Congress. Therefore last year a resolution was passed. It was recommended by the committee on railroads. I have the resolution here and will submit it without reading.

The resolution is as follows:

[Commonwealth of Massachusetts, in the year one thousand eight hundred and ninety-one.]

RESOLUTION relating to couplers and brakes on freight cars.

Whereas from the last published statistics of the railways in the United States, being for the year ending on the thirtieth day of June, in the year eighteen hundred and eighty-nine, it appears that three hundred employes were killed and six thousand seven hundred and fifty-seven injured in that year in coupling and uncoupling cars, being fifty-six per cent of all the accidents happening to train men, and practically all these accidents can be avoided by the adoption of uniform automatic couplers for freight cars; and

Whereas five hundred and fifty-eight employes were killed and two thousand three hundred and seven injured by overhead obstructions or by falling from trains and engines, being twenty-three per cent of all the accidents happening to train men, and a large proportion of these accidents would be avoided by the adoption of the train brake on freight trains; and

Whereas the regulation of couplers and of train brakes upon freight cars is of pressing importance and is within the proper scope of the powers of the Congress of the United States, while action by the individual States on these subjects has produced and must continue to produce conflicting and unsatisfactory results; and

Whereas at the convention of railroad commissioners lately held in Washington at the rooms of the Interstate Commerce Commission, upon motion emanating from the board of railroad commissioners of this State, a resolution was unanimously adopted providing for the appointment of a committee of five to appear before Congress as soon as possible after the opening of its next regular session, and urge the passage of measures calculated to insure and hasten the adoption of uniform automatic couplers and train brakes upon freight cars, and of driving-wheel brakes on engines,

Resolved, That the senate and house of representatives of the Commonwealth of Massachusetts, in general court assembled, approving of the action of its board of

railroad commissioners, do most respectfully and earnestly urge upon Congress the consideration of the foregoing subjects, to the end that the consummation which all desire may be reached with the utmost reasonable speed, and especially do we urge upon our Representatives in Congress to join energetically in promoting wise, speedy, and effective action, and that a committee of one on the part of the senate, and two on the part of the house be appointed to convey this resolution to Congress, and act in conjunction with the committee appointed at the convention of railroad commissioners to urge upon Congress a speedy consideration thereof.

HOUSE OF REPRESENTATIVES, *March 30, 1891.*

Adopted: Sent up for concurrence.

EDWARD A. McLAUGHLIN, *Clerk.*

SENATE, *April 6, 1891.*

Concurred.

HENRY D. COOLIDGE, *Clerk.*

A true copy.

Attest:

EDWARD A. McLAUGHLIN,
Clerk of the House of Representatives.

Those resolutions state for themselves the feeling of the legislature last year in relation to this important subject.

We ask for legislation. We do not ask that a particular coupler be adopted. For that we do not care, and have no preference; but we do ask that something be done to hasten the time when there shall be a uniform system.

The gentleman who preceded me says while there is an evil it is being remedied, and therefore little legislation at the present time is needed. We feel that something should be done to hasten the transition stage. It is well known to all that when any reform is commenced there are a good many who say, "You can not do anything to aid this reform; it will come of itself. Sentiment must back up your law to a certain extent."

That is true. In the Commonwealth of Massachusetts the sentiment is right. What we ask for is legislation. The gentleman who preceded me admits that the sentiment is all right. But there are always a few who hang back. There will be a few railroads that will say, "Oh, if this committee reports that no legislation is necessary upon this subject, then we shall still cling to the link and pin."

We do not want that. We think a date should be set when they should, at least, do away with the link and pin. We think a day should be set when the safety coupler which they have here described, or some other coupler which is safe, should be adopted, and upon that we think legislation would be a great aid, and we are to urge upon you that you take a step in this direction which shall not only tend to hasten the time, but shall tend to show that Congress is willing to aid in this reform.

The railroads, of course, when public sentiment pushes them, must necessarily take some step; but not all railroads. There will be short railroads that do not care particularly for public sentiment, and there will be some large railroads that will be not very particular about the sentiment of the public as relates to them. The railroads as a whole will concede that public sentiment is something upon which they must act; and if you say a day shall be set, and you set it, when this appliance shall be in general use, or cars are not to be drawn over these roads, or something of that kind, it seems to me that you will hasten the time of this transition stage, and that in this way you will do something that the railroads say ought to be done. You will be aiding a reform, and you will at the same time not be doing an injury to the railroads.

That is all I desire to say to you.

The CHAIRMAN. You take the ground that some legislation is necessary. Now, can you define, as nearly as you may be able, what sort of legislation should be adopted by Congress?

Mr. POWERS. The particular thing which it would seem to me ought to be done is to set the date when the coupler should be of a safe character. There are certain couplers that are now known to be unsafe. Why should they still be permitted to be used?

The CHAIRMAN. You have heard the discussion by Mr. Crocker on the bill offered by him and presented to the committee to-day. Have you any criticism to make of that bill?

Mr. POWERS. I should not care to criticise the bill, for the reason that I have not examined it with that care with which one ought to examine any bill in order to criticise it. Neither would I care in all respects to say that I knew it was just right for the same reason.

The CHAIRMAN. I did not know but what you had given it careful consideration.

Mr. POWERS. I only saw the bill when it was presented to the committee this morning, and certainly some principles of the bill are correct.

The CHAIRMAN. There is a provision in that bill that seems in a measure to leave the matter open as to any compulsion. Do you think that would be a safe provision to enact in the light of what he says?

Mr. POWERS. You now ask for my personal opinion?

The CHAIRMAN. Yes.

Mr. POWERS. It seems to me if you should pass a law of that kind 60 per cent of the railroads would fall in with it.

The CHAIRMAN. You believe they would?

Mr. POWERS. I think so.

The CHAIRMAN. Suppose they did not; then what would happen?

Mr. POWERS. You would be still in your present condition, and I should not object to having that section so framed, or the bill so framed, that it would compel them, whether they decided to fall in with it or not. I should not necessarily urge that that section of this bill be held as of any wonderful importance, but my own personal view is that they would fall into it.

The CHAIRMAN. You think it would come out all right because 60 per cent of them would be in favor of it?

Mr. POWERS. The railroads in Massachusetts are following that particular idea.

The CHAIRMAN. And the air brake?

Mr. POWERS. And the air brake. I have not heard so much said in relation to that, even in Massachusetts, and I think the railroads there are anxious, both in relation to couplers and brakes, to get the best, and that they will readily fall in and assist in any legislation which would tend to make the couplers safe or the brakes safe. I think that they would very readily be a part of the 60 per cent.

STATEMENT OF F. H. RAYMOND.

Mr. RAYMOND. Mr. Chairman and gentlemen of the committee: I do not wish to take the time of the committee any further, because Mr. Powers has so well represented his committee here in regard to this matter.

My attention was called very forcibly to what the gentleman representing the railroad stated—that many of the crossroads would not

adopt a coupler, because they were so uncertain of what Congress would do in this matter.

It seems to me, therefore, very important that Congress should do something. If it should do something those roads then would evidently fall into a definite proposition, and certainly the number of deaths and accidents that are happening in this country ought to be something that would induce Congress, if possible, to frame a bill to carry out its results.

Now, regarding these couplers, I know nothing. It seems to me there are several which will interlock and become practically interchangeable.

I would suggest—I do not know that it is feasible at all—that Congress should secure possession of such couplers and give them freely to the railroads who wish to adopt them. I think certainly if the expenditure of sufficient money to own couplers of this kind was necessary to prevent the loss of five or six or eight or ten thousand lives a year it would be worth the effort to secure it.

The CHAIRMAN. Do you think there is any necessity for Congress to purchase these patents in order to secure this protection by legislation.

Mr. RAYMOND. If many of the railroads are so poor that they can not buy this I think they ought to be helped out when you consider the fact that it is to prevent the loss of life. There is a member of my committee here, who represents the other side, who is desirous of being heard.

The CHAIRMAN. Which do you call the other side?

Mr. RAYMOND. From the operatives' side, representing their interests more particularly. I would like to have Mr. James H. Mellen address the committee.

STATEMENT OF JAMES H. MELLEN.

Mr. MELLEN. At 4 o'clock yesterday afternoon we took the train for Washington, and most of us only had an intimation the night before that we were going to be assigned to this duty. Hence, the first time we have had an opportunity to look for the authorities with an idea of presenting a case was in this room this afternoon.

I have here the reports of the railroad commissioners of Massachusetts, a very conservative body. The ex-chairman, Mr. Crocker, you heard this morning. But I am not without some knowledge of the subject.

I have been a member of the Massachusetts legislature for ten years. I began fifteen years ago. I have been most particularly identified, as is pretty well known in Massachusetts, with the legislation seeking the amelioration of the condition of the employé class, and I believe I have introduced or supported almost every measure that has gone on the statute books of Massachusetts in the direction of legislative reform in the interest of the masses during the past fifteen years.

Let me say here that the United States, I am plain to say, a community of States governed by the people, in the interest of the people, so said, is less considerate of the interests of the common people, the employé classes, than is the sometimes somewhat effete constitutional monarchy of Great Britain and Ireland—that is, if the matter is to be determined by the number of ameliorative acts upon the statute books of the respective Governments. That is not to our credit; but I am pleased to say that of all the States in the Union that approach England in legislation in the interest of the great masses the State that I

have the honor to claim as my native State leads the van, and that they are not cranky in the enactment of legislation. As an evidence of it we can point to the fact that the other States of the Union are one by one copying Massachusetts enactments in the line of the protection of the operative class.

Ten years ago I introduced a proposition looking to the protection of the railroad people. My colleague from my city, a fellow-Democrat—I may interject here that the most of my committee are Republicans, so that we are not divided on political lines on this question—has been the champion of legislation in the direction that that legislation would indicate within the past ten years.

The CHAIRMAN. This is the resolution that you referred to?

Mr. MELLEN. We should have submitted one to-day, Mr. Chairman, that was enacted yesterday, but we had not time to wait; we had to take the train immediately.

I am sure you will take our assurance that the Massachusetts legislature of 1892 has reiterated what it said in 1886, what it said in 1888, what it said in 1889, what it said in 1890, and what it said in 1891, and now we say, in 1892, and we tell the representatives of invested rights, in the name of humanity we ask how many more years will we have to reiterate those resolutions before the Congress of the United States takes some definite steps?

Leave it to these gentlemen? How evasive are the gentlemen's replies to you? They are artfully dodging the issue. They have very astutely presented the case of railroads who are not disposed to take immediate action.

Now, we are not radical. In Massachusetts we have been just so conservative that we have convinced the most conservative of our railroad people that we are right. The gentleman you heard this morning representing in his family a million dollars of stocks, and a gentleman who is not supposed and who is not known to be affiliated or in sympathy with the so-called labor reform people of Massachusetts, is thoroughly imbued with the need of this legislation. He is a splendid railroad lawyer, and has got as much interest perhaps as any one individual in this room who represents any of the railroads that are here represented.

Hence we say we are not cranky. We are not asking for anything impracticable. We do not even want to draft our own bill. We permit the conservative railroad interests who are disposed to do something to draft the bill. We do not want the thing to go into effect twelve months or twenty-four months or thirty-six months hence if it is not practicable. But if the thing can be done and if two thousand lives and twenty thousand maimed, brave fellows can be saved by reason of the enactment of some bill by this Congress this session within the next year, then we want it done.

We are here to represent humanity. We are not here to oppose vested interests or do aught to their detriment. We are not inimical to them. We say as is said by our conservative railroad men that the same is practicable, and we want these people who are dragging behind the procession of progress to come up abreast of us.

I was somewhat amused at the sneering remark, if the gentlemen will permit me to say, at the leveling process, at the retarding of civilization that any such enactment would effect. We do not want to retard progress. We do not want to interfere with American invention. We want to stimulate it,

The CHAIRMAN. You have studied the subject a good while. What kind of an act would you favor if you were a member of Congress?

Mr. MELLEN. I would vote for an act that would oblige the railroads, subject to the authority of the Interstate Commerce Commission, to adopt some interchangeable coupler within at least twenty-four months.

The CHAIRMAN. You have heard Mr. Crocker expound the provisions of his bill. Do you give your assent to these provisions?

Mr. MELLEN. I do not in the main, although I think I appreciate the force of a suggestion made by a Senator that it put power in the railroad corporations to block the purpose of the act. I would frame it a little differently. I would not put that power in their hands.

The CHAIRMAN. Do you think that probably 60 per cent of the cars represented favor something of the kind?

Mr. MELLEN. I do not know. In the East I think they would.

Senator WILSON. Do you think it would be practicable within twenty-four months for all of the companies to place upon all of the cars the coupler that you favor?

Mr. MELLEN. I think it would, and the air brake, too. Now they have the air brake on all first-class cars in the country, as I understand it, and they could force all the others who have not that brake to put it on.

The CHAIRMAN. Have you made such investigations as would satisfy you that that could be done?

Mr. MELLEN. All I have is the testimony of railroad men and the opinions enunciated in our State reports from experts who were instructed by our legislature to make inquiries.

The CHAIRMAN. Do you think that in two years from the passage of the act the provision of the law ought to be that no car should be hauled unless it had such couplers?

Mr. MELLEN. I would not higggle about that. Three or four years would suit me. I think if you once give notice to the railroad corporations that it must be done within a limited time they will do it at once—set their mechanics and their inventors at work and agree upon the most practicable coupler and air brake that could be devised, and would introduce it by concurrent or joint action on the part of the railroads.

Then there is another thing in connection with that that we of Massachusetts were asked to bring to your attention, and that was the matter of forcing the railroads to heat their cars in some other way than from the heat radiated from coal in the stove. The gentleman did not allude to that in his remarks. There are a goodly number of cars that still use the old-fashioned stoves in heating. We would have the national Government interfere and put a stop to that. The holocaust at New York a few months ago should be an object lesson that should stir up the members of the national Government and cause them to enact a law that would make it obligatory upon all railroads within a very short time to use some heating apparatus other than coal stoves.

Now, sir, the President of the United States, two years ago this December, recommended, as may be seen of course from your own documents and from a document which I have here, the doing practically of that which we are asking.

The CHAIRMAN. We are familiar with his recommendations. The difficulty with the committee has been to satisfy itself that it was not making a mistake in any legislation it might enact, which would do the employes more harm than good. We have been growing along trying to find out as fully as possible what would be the safe thing to do,

Mr. MELLEN. We have been very active in the premises; we have secured practically a unanimity of sentiment among the people of the State, some of the most conservative have been brought around to our views. At the inception of this movement we had to meet with a good deal of opposition in the legislature in the interest of the railroads. They are now agreed. Those who have had schoolmates and neighbors killed under their eyes, who have seen their blood trickling along the road are a little bit anxious that the national Government shall manifest more interest in the future than it has in the past.

I think it was six years ago that we sent our first resolutions. Then we sent them again four years ago, in 1888, and in 1890, and last year, and again this year; and, yet, sir, so far as I know, if I am wrong stop me, the first step in the direction of positive action yet remains to be taken by our Government. Hence it is that some of us have a little bit of feeling in the matter. One State is practically unanimous, and we are told by some of the gentlemen who represent the employés that there are other States, five or six of them, in accord with this sentiment, and those States have in the main the great bulk of railroad employés of this class within their borders. I hope, Mr. Chairman, that this body will see their way clear to urge some positive action.

The CHAIRMAN. This committee has undertaken to find out, if possible; exactly what the switchmen and the laboring men employed on the railroads thought and desired on this question, and hence many of them are here to-day.

Mr. MELLEN. I want to say just this in that connection: I have been the State officer of one of the great laboring organizations of Massachusetts, as well as being in the legislature for ten years. I am somewhat familiar with this class of employés. They are probably the understrata of the railroad employés; that is, they are the poorest probably; the most thriftless; they are the least saving; their occupation is the most precarious, the most dangerous; and perhaps that may be one of the reasons why they are so reckless and so thriftless. The other classes of railroad employés are more thrifty and more careful, and as a consequence they are more potent in making their opinions felt in the body politic. Now, the occupation of the railroad brakemen, a goodly number of them are citizens, is such that they are constantly shifting about and they are of no account in politics, and I think by reason of that fact that they have been slaughtered by the thousands, and have been maimed and crippled, pauperized, and those belonging to them as a sequence.

I am not talking about something I am not familiar with, because I was reared among just that class of people. I have in my mind's eye now a dozen men who were youths with me, who have lost their lives in my own city, or adjacent thereto, in this terribly dangerous occupation, and I know when they passed away there was a regret in the immediate circle of acquaintances, but beyond that there was the mere notice that Joe Johnson or Mike Finnegan tumbled last night from the top of the car or was thrown from the train or was bumped by a freight car and lost his life or his limb.

The CHAIRMAN. You desire legislation, and that speedily, that will give protection to these men engaged in this dangerous employment?

Mr. MELLEN. Yes, sir, and a number of States are in consonance with that sentiment. A number of us have been agitating it for ten years. They have acted and the Congress has done nothing, and we expect that it will begin doing something for that class of operatives very soon.

STATEMENT OF F. W. BLISS.

The CHAIRMAN. What is your name?

Mr. BLISS. F. W. Bliss.

The CHAIRMAN. Where do you reside?

Mr. BLISS. Boston. It is not my purpose to take part in this discussion, as I am expected to-morrow to appear before the House committee on this matter, but Brother Mellen has suggested a limiting of the time when this law which may be contemplated by your committee shall take effect. I think he has placed the limit too far ahead. The suggestion has come from Mr. Hains this afternoon that the railroad would wait until the last moment until they would do anything on this matter. It is admitted on all hands that there have been discoveries made which are an improvement over the old system of link-and-pin coupler, a system which is being used and improved constantly, and, as has been said before you, is constantly put on new cars. Now, I think that far as adjusting any method of coupling to a freight car is concerned it does not require but two years to put it on. Railroad men have already considered what is the best coupling, that they are improvements over the old ones, but instead of trying to find the most perfect coupling they should take the best ones they have within their means to-day and immediately apply them to their freight cars. Of course gentlemen will know that railroads are prone to use up their old railroad stock, and that perhaps railroad men would hardly feel like putting modern appliances on a good many of these old cars. I think, if a period of time is to be fixed, that six months would be ample time for the railroads of the country to put on the modern couplers.

Senator HIGGINS. And to determine what new improvement should be adopted.

Mr. BLISS. I do not suppose it would be possible to discover the perfect coupler within six months or two years or ten years. I expect progress is going to be made constantly in this matter.

Senator HIGGINS. Is it your proposition that the railroads within the six months shall determine the improvement and also apply it?

Mr. BLISS. Yes, sir.

Senator WILSON. Do you think it a physical possibility that every car in use in the United States within six months could be brought within the line you suggest?

Mr. BLISS. I do not think it would be possible for cars that are owned at a remote place and that are now in use to get back to their own shops to have these appliances put on. Take a car belonging in Washington. It would hardly be time to have the car sent there and have it done in their own shops, but I think this matter could be arranged so that these improvements could be made within six months, without their being made in the car shops, but perhaps where the couplers are manufactured. I can see that it would be impossible for all the freight cars scattered throughout the United States to be returned to their homes and equipped within that period.

Senator HIGGINS. Are you a mechanic?

Mr. BLISS. No, sir.

Senator HIGGINS. You do not speak as a mechanical expert?

Mr. BLISS. No, sir.

Senator HISCOCK. What is your business?

Mr. BLISS. I am a lawyer.

The CHAIRMAN. You are a member of the legislature?

Mr. BLISS. Yes sir.

The CHAIRMAN. You do not expect that any great amount of time will be consumed by the railroads in coming to a conclusion as to what coupler will be used?

Mr. BLISS. No; I think their minds are pretty well settled on that already.

Just one word while I am on that point with reference to brakes. The railroads already have had sufficient notice that the brakes they are using, not only on freight but on passenger cars, are not adequate. They have had a terrible accident in Quincy, where it was shown from the investigation that the six-wheel trucks have not the proper appliances.

Senator HIGGINS. In the way of air brakes?

Mr. BLISS. Yes, sir. They only apply to four wheels, and so long as the railroads can use their present appliances and rolling stock to the best advantage, perhaps, to the road, they will not adopt these improvements as rapidly as the public demand.

STATEMENT OF J. A. LAKIN.

Mr. LAKIN. Mr. Chairman, I can not agree with the gentleman who represents the railroads in regard to fixing no time for the adoption of these appliances. It seems to me that the committee should be competent to fix a time that would be reasonable.

The CHAIRMAN. What do you think a reasonable time would be?

Mr. LAKIN. I should say it would take three years, at least.

The CHAIRMAN. These general declarations are easily made, but when you come down to business we do not know what to do about it.

Mr. LAKIN. I should say it would take three years at least, from the fact that there are many cars in use that would have to be thrown away if you undertook to make it within a less time. There are a great many cars that do not get home, I assume, in a great many months, and it may be that those cars are used back and forth. While it is intended that a car should be shipped homeward as fast as possible, I presume that there are a great many cars that will not get home in two or three years. They will be used on other roads, and it would be quite a tax on the railroads to ask them to change the old cars and put on the new appliances.

Again, there may be, inside of three years, other inventions or improvements on the system now in use.

The CHAIRMAN. You would have the railroads wait three years before they decided whether there was anything better or not?

Mr. LAKIN. No, sir. I should say that the cars should be equipped within that time; or, if in the judgment of the committee, that time was too long or too short, viewing all sides of the question, they should fix the time. I fancy that if there were no time fixed, the railroads would take fifty years, if necessary, like the man who was going to buy a cook stove and stop using the old-fashioned crane when all the improvements had been made on the stove.

Now in regard to couplers, it seems to me that the committee should decide upon some principle and not confine the system to any one patent, but if a hundred patents can be made to interchange and carry out the same principle that would be satisfactory to the employes as well as to the State which I have the honor to represent.

The CHAIRMAN. All that the employes want is the ability to couple a car without the necessity of going in between the cars.

Mr. LAKIN. Yes, sir; that is as I understand it, and the couplers that have been shown here are, I think, a step in the right direction, that the system shall not be tied up to one particular kind of coupler.

Senator HIGGINS. Will it not have to be tied up to the kind you ultimately adopt?

Mr. LAKIN. No, sir.

Senator HIGGINS. Would it not require a very radical change?

Mr. LAKIN. I should say not. The previous gentleman was asked whether he was a mechanic. He said he was a lawyer. I am a mechanic. I think I can invent in three months fifty different couplers that will have the same principle in them and that will couple together and still be different patents.

The CHAIRMAN. Would they not be the same coupler pretty nearly?

Mr. LAKIN. No, sir, they would not. They would all be different, and you would say, to look at them in different towns or in different rooms, that they would not work together, but when they came together they would work just as nicely as if they were made just exactly alike.

The CHAIRMAN. You mean that there would be some little trigger different about them, but the one principle would be governed by one patent.

Mr. LAKIN. No, sir, it would not be. It would have to be covered by fifty patents for the fifty inventions. I say there should be a system adopted by the committee so that any invention that would work in harmony with any other patent and shackle and unshackle with any other patent could be adopted by any road. I do not care to take up more of the time of the committee; I just wanted to bring out that particular point.

STATEMENT OF S. E. WILKINSON.

The CHAIRMAN. What is your name?

Mr. WILKINSON. S. E. Wilkinson.

The CHAIRMAN. What is your position?

Mr. WILKINSON. I am the grand master of the Brotherhood of Railroad Trainmen, composed of conductors, brakemen, switchmen, yardmasters, baggagemen, and passenger brakemen and there are a few other people identified with the organization who have gone out of the railroad business.

The CHAIRMAN. Let us know what you think ought to be done in the premises?

Mr. WILKINSON. The question is a great deal easier asked than answered.

The CHAIRMAN. I have found that out myself.

Mr. LAKIN. We are very modest in our request. We want something done to better our condition; that is, to save our lives and our limbs. The organization that I have the honor to represent commenced by looking after the sick, taking care of the wounded, and burying the dead. It afterwards started out with a predetermination to become a labor organization, benefiting the condition of the men financially. How successful it has been in that one particular we leave the records to prove.

There has been a great deal of talk about automatic couplers. Those who are practical railroad men, and who are engaged in the switching and coupling and uncoupling of cars to-day, claim that they have

not found any device that reaches that standard of perfection which is desired at the present time. It is claimed that these various couplers are interchangeable. The men that we represent claim that they are not interchangeable. Under certain conditions, if they be favorable, they will couple, but as a general proposition, taking the different devices, they do not successfully couple or they do not successfully uncouple unless everything is in place so that it is advantageous to the draw-bar in question.

The CHAIRMAN. In the operation of the coupling of cars with these devices, does it ever occur that the switchmen have to go between the cars?

Mr. WILKINSON. Yes, sir, quite often; and it is a matter of presumption with a practical man that, so far as the devices at present in use, they will always have to do that. There is no device, unless it is the Miller—that is on the passenger coach—which does not require it, and sometimes they have to go under the platform to uncouple them. I have been identified with the railroad service for twenty years, for the larger part of that as a switchman. I have come in contact with a great many of the different devices, but during the last few years I have been identified in the labor world, and I know very little myself. I get my information from those I represent as to the practicability of the couplers that are used at the present time.

There is a great deal of difference of opinion among the men identified with this service as to what we want. Mr. Haines gave you a statement of what has already been done, and I would like to ask Mr. Haines or you the question if you understand by his remarks that he is in a position to-day, or the gentlemen he represents, to guarantee within a reasonable length of time that the same amount of progress that has been made in the past few years will be made in the future. He did not say anything about that.

The CHAIRMAN. Mr. Haines is here, and he can answer the question himself.

Mr. HAINES. I will say that the past is a pretty good guide to the future, and looking at what has been done and accomplished since October, 1890, with us I should say that the process of adopting an interchangeable coupler that can be coupled from the outside of the car without going in between is proceeding at an accelerated ratio. There are about 20 per cent of the cars so equipped to-day. I do not say that under no possible contingencies would it be necessary to go in between the cars, but I say that under no possible contingency is a man compelled to go in between the cars when it would be dangerous for him to do so, with the adoption of a release-rod connecting the locking device of the master car-builders' type of coupler.

Mr. WILKINSON. You, gentlemen, to whom have been delegated this highly pleasing duty of protecting the railroad men, I presume will take into consideration the fact that with the devices shown here at the present time our death ratio and our ratio of injuries are larger at the present time than they were before any of the new types of couplers came into existence.

Mr. HAINES. Will Mr. Wilkinson permit me to add one word to my statement?

Mr. WILKINSON. Yes, sir.

Mr. HAINES. I said in my statement that up to the time that 50 per cent. of the cars were equipped with this type of coupler the danger would not diminish, but that after that time it would decrease.

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Mr. HAINES. I said in my statement that up to the time that 50 per cent. of the cars were equipped with this type of coupler the danger would not diminish, but that after that time it would decrease.

'The CHAIRMAN. You claim that there is more danger at present than there has been heretofore?

Mr. WILKINSON. Yes, sir.

Mr. HAINES. It has increased, has it not?

Mr. WILKINSON. Yes, sir. My opinion as one of the representatives is very different from some of those of my associates. Still, I believe that as the master car-builder is not a practical railroad man, he does not go out and test these couplers from time to time, he is not perhaps in as good a position to find out the true condition as a man really engaged in that part of the service. I will say as to Mr. Haines's statement with reference to the composition of his committee, that I happen to be personally acquainted with these gentlemen, and know that they are all practical railroad men, that is, they all served at one time in the humble capacity of brakeman, but it strikes me that if the kind of coupler has not at the present time been put into service, it would be a good thing to have a certain number of men act in conjunction with the gentlemen he names, and, if you please, this committee or representative men that they could appoint, some of us who were disinterested. The idea as it presents itself to us to-day is that all of the railroads have a perfect right to equip their cars with any particular device they see fit. If anybody hands them a good patent, something that they believe is going to be the thing that they want, and that all the railroads will have to adopt, they will buy a certain interest in it. They will equip their cars, and those cars will come in contact with others that do not couple. Then it becomes necessary to couple two of those patent devices together and then the danger is increased proportionately. It is also a true statement that the labor connected with these men who are engaged in active service at the present time is increased each year about 1 per cent.

The amount of work that was done five years ago by an engine is now almost doubled. The work that was performed by one switchman five years ago, to-day is necessarily double. The pay has been proportionately increased.

It has been my misfortune to call upon several of the representatives of railroads in the last year asking for an increase of wages. This is the manner in which our proposition was answered: "Well, you men have been engaged in a political movement to get us to buy a certain kind of coupler. Now we are going to use the money that we ought to give to you to buy the coupler." So that we claim under those circumstances, if the President of the United States, if you please, and this particular committee, or all the humanitarians in the human race see fit to protect the interests of those who have been railroading for a number of years and have not been sacrificed up to the present time, it is not fair for these railroad managers to say now, if they make us adopt measures of that kind you will have to pay for it. That is one of the things we labor under as an organization at the present time.

This is the first time we have ever appeared here asking for anything.

The CHAIRMAN. You mean to say that the railroads intimate to you that if you gentlemen insist upon legislation looking to the adoption of a safety car coupler, they will reduce your wages in order to make up the amount which it costs them by such legislation to pay for the couplers?

Mr. WILKINSON. I stated that the labor had been increased and wages increased correspondingly. But in many instances during the past year I called on general managers and they said, there is a move-

ment of this kind on foot that we attribute to you men. If that is carried out we will have to take the money that we give to you and put it into this equipment that we will be compelled to put on. So that if they do put on the equipment we will have to pay for it.

The CHAIRMAN. Let me ask you another question. Suppose this automatic coupler, or some such coupler, were adopted by all the railroads, and also the air brakes, what would it result in as to the employment of men who have heretofore been doing this work; would it reduce the amount of labor necessary to run a railroad?

Mr. WILKINSON. I do not think so.

The CHAIRMAN. I have heard some one intimate that it would, but I do not know what the fact is.

Mr. WILKINSON. The statement has been made by some of the men who have been identified with this association that whenever you have all automatic couplers to power brakes they will not need any brakemen or switchmen. But I have had enough experience to satisfy me that it does not make any difference whether you have an automatic coupler or not, you have to have a man who has a good head on him and a good deal of ability to uncouple them successfully. And there are many times when the air brake refuses to work when you use the old Armstrong or the hand brake. So that I do not think that there will be any decrease in the number of men employed, but I would judge that if they are more intricate than they are at the present time it would have a natural tendency to increase the number of men, because if things are favorable you can remove a pin in the old link and pin with very little slack and do it very quickly.

There are many things that could be done to better the condition of the man who works for a railroad. There are a great many of the general managers who have done a good deal to the betterment of the men's condition and we have always met with a great deal of fairness and we have been largely benefited. But we believe we have also largely benefited their service in this country. Still, we are not in a position to-day to say what any railroad company shall adopt as an automatic coupler. We do not believe anybody is in a position to-day to dictate to them what it should be, but we believe in order to amicably adjust this matter within a reasonable time that a committee of practical railroad men, men who have been switchmen for 12 or 15 years, be appointed, and if they have an opportunity to test these appliances after they have been passed upon by the committee spoken of by Mr. Haines and also recommended by the master car builders, they would know within a reasonable length of time whether the device was a practical one or not.

Senator HISCOCK. Do you think a committee of that kind would be more valuable than the association together of half a dozen of the most skilled mechanics, especially in respect of railroad appliances, whose business it is professionally to devote their whole time to the examination of every new device, and as far as they can to improve on those devices, and the railroads, as fast as they materialized something that they thought was an improvement, testing it?

Mr. WILKINSON. Yes, sir.

Senator HISCOCK. You think it would be better than that?

Mr. WILKINSON. Associated with the gentlemen that you speak of, as an inventor—

Senator HISCOCK. I am not speaking of an inventor. I am speaking practically of a commission, a bureau being organized that will take up all inventions, all devices for the improvement of couplers and brakes

and everything connected with railroad transportation, examine them, and on their report have the railroads put those appliances or devices into use and test them by actual use.

Mr. WILKINSON. As far as the coupler is concerned; yes, sir.

Senator HISCOCK. Would this committee that you speak of be any better than the brakemen themselves who use it?

Mr. WILKINSON. No. I would take my choice from the men actively engaged in the service of railroads, some railroads; a man who was constantly connected with coupling and uncoupling them each day.

Senator HISCOCK. That is what I suppose they do. If they take the cars with these devices and put them on the roads with a view of testing them, the results reported carefully and accurately, and whenever it is impossible to devise an improvement that it should be the business of these men to devote themselves to the study, at least, to see if they can improve it.

Mr. WILKINSON. I have been in the service twenty years, but I have never seen a committee of that character in my life.

Senator HISCOCK. I think you will find that there is just such a bureau as that in the New York Central system, in the Pennsylvania system, and in several other systems, and notably such a bureau as that which is created by these large car-building establishments.

Mr. WILKINSON. The Pennsylvania has got an equipment, with the Delaware, Lackawanna and Western, which has cut off more arms than anything of the kind on earth.

Senator HISCOCK. I am not speaking of that. I am coming down to the question of whatever they do in the direction of mechanical skill, if they do anything for the purpose of correcting just that. It always seemed to me that if they acted in good faith, if there were organized by a railroad system or by railroad systems combined a force of skilled machinists and mechanics whose sole business it was to investigate every invented device they could learn of and improve on it themselves, and if the railroads devoted themselves to testing those improvements, that there was hardly anything better than that that could be done in the way of a commission.

Mr. WILKINSON. It has been always the truth that there has always been a difference of opinion amongst men. My proposition is that if a man puts in fifteen years of his life as a practical switchman, and does not engage in any other service, that he is one of the most competent persons to judge of any adaptability in the line of switchmen of any other person in the world.

Senator HISCOCK. I believe with you that a practical switchman, taking two devices, would be the best judge as to which one he could operate with the greater facility and safety, and yet he might not have the least genius in the world for creating or inventing the devices in the first instance, or suggesting any improvement to it. Now, as I understand it—I may be mistaken about it—some of the large trunk lines that I have mentioned have had organized in their service a bureau of mechanics. They have had a force who were employed at nothing else, and as soon as they had perfected as far as they could a device or machine, it was put on the cars and tested by actual operation, by actual service, by men who are just what you describe, practical brakemen and practical switchmen.

Mr. WILKINSON. These air-brake cars are sent over the road under the management of a direct superintendent for the purpose of educating the men as to the action of air brakes. But so far as couplers are concerned I have never visited a test and never heard of one.

The CHAIRMAN. Have you anything further to say?

Mr. WILKINSON. I believe that covers all. We are very anxious that something should be done at as early a time as it is practicable.

The CHAIRMAN. As to exactly what that time is you are not prepared to say?

Mr. WILKINSON. No, sir; nor to make any suggestions. But the sooner the better.

Senator HISCOCK. Have you ever yourself put into form the legislation that you would propose?

Mr. WILKINSON. No, sir; I do not believe I have the ability to do that.

Senator HISCOCK. I might say that I never saw anyone whom I thought had.

Mr. WILKINSON. I agree with you on that proposition. I have one other expression to make.

Senator HISCOCK. I am glad we agree on that question, because that has always been the trouble, so far as I am concerned.

Mr. WILKINSON. We are paying \$37,000 a month to disabled brakemen and to the heirs of those who are killed. That is the amount we are paying each month at the present time, and instead of it decreasing each year it is increasing, so that the sooner some legislation is enacted in that direction the better. Anything that can be done to better our condition will not only be appreciated in so far as the saving of our lives and limbs is concerned, but in saving the small compensation which we receive for our services.

Senator HISCOCK. Let me ask you one other question, and I think that will be all. You have been connected with railroads in your present position for the last twenty years, which would make you pretty familiar with it. What do you say about the promptness with which railroads—I will say trunk lines that are able to do so; I imagine there are a great many small railroads built in some sparsely settled country which can not; but so far as corporations that we know of in the East, the Pennsylvania road, the New York Central system and the New England system—adopt new appliances? How promptly could the new appliances after they have been tested be put on the cars at the shops where the cars are built? What do you say about improvements in that direction within your own knowledge, say within five years?

Mr. WILKINSON. The Pennsylvania has made some improvements in that direction in the past five years. I can not say as to the New York Central; but if they have not it is high time they did. They have some of the poorest rolling stock in the United States. The roads west of the Missouri River, the Missouri Pacific, the Northern and Southern Pacific have adopted all the appliances within the last five years; within a year after they were perfected and put in use.

Senator HISCOCK. I asked that question because I have heard it stated by railroad men, I think in this committee, that there was no valuable invention for the saving of life and limb, that had been reported upon by competent people or had been discovered, where the railroad companies were able to make the change that they did not do so.

Mr. WILKINSON. The Pennsylvania has adopted the block system, I think, over all its lines.

Senator HISCOCK. I said I heard that statement made, that they did go just as fast with these improvements as they could under the circumstances.

Mr. WILKINSON. As far as air brakes and automatic couplers are concerned, as I have stated, the roads enumerated have been the first to

take them up. I would like to ask Mr. Hains if the Northern Pacific, the Missouri Pacific, and the Texas Pacific are members of your association. I have been given to understand that those three railroads at present are adopting what is known as the Safford drawbar at the rate of 1,200 per month. The statement was made by Mr. Hains as to their being a party to the interchangeable couplers that were presented here; and the Santa Fé is also putting on the old link and pin.

Mr. HAINS. That company is not a member of our association.

Mr. WILKINSON. The Santa Fé?

Mr. HAINS. No, sir.

Mr. WILKINSON. The Northern Pacific, Missouri Pacific, and Texas Pacific are?

Mr. HAINS. Yes, sir.

Mr. WILKINSON. I have been informed that they are putting on 1,200 of the old-fashioned drawbars. It is a new kind of an old-fashioned bar, known as the Safford bar.

The CHAIRMAN. Is it better than the old one?

Mr. WILKINSON. I am not in a position to state. Mr. Safford is here, and I am not working for any drawbar company. That has been a handicap for all men connected with this association. If they say anything connected with the drawbar they are accused of getting a certain per cent from the association. We have all been approached, but we have not got any money yet, I am sorry to say.

STATEMENT OF FRANK P. SARGENT.

The CHAIRMAN. What is your relation to the railroad business?

Mr. SARGENT. I am grand master of the Brotherhood of Locomotive Firemen.

The CHAIRMAN. Where do you live?

Mr. SARGENT. Terre Haute, Ind.

The CHAIRMAN. Please proceed to state what you think about this general subject, whether Congress ought to pass any act at all, and if you know what kind of an act you think should be passed, please tell us.

Mr. SARGENT. It is very evident to-day, Mr. Chairman, to one who associates and converses with the masses that the time has come for national legislation looking toward the adoption of proper appliances upon the railways of the country for safety to life and limb.

It is not my purpose to speak of the feelings that exist throughout the country in that direction, because it is manifest to every one that all have a kindly feeling for each other. But this question is one of grave importance and one that requires careful consideration, and I have yet failed to see in the many bills that have been presented to me the solution of this question.

National legislation, in my opinion, is to come, and it seems to me that what ought to be considered first is the proper steps to be taken by Congress in that direction.

We have heard to-day from some of the able representatives of the railway interests of the country as to the appliances which are now in vogue. We also conversed with the representative employes of the service, and they all tell us at this present time there is not a safety appliance as a coupler that meets the requirements of the service. Therefore, to introduce a bill into Congress to-day making a certain type of coupler the standard, and compelling the railroad companies of this country to adopt it within a specified time, in my opinion, will be an injustice to the corpo-

ration and an injustice to the employés. But I believe the first step necessary on the part of Congress in that direction is to find a means to determine what the best appliance is, and, when that has been determined, then act in conjunction with the railway employés, the railway officials, the masses at large, in having that particular device adopted.

THE CHAIRMAN. Now please tell us how to find it.

Mr. SARGENT. The suggestion I have to offer is this, that a bill be introduced in Congress providing for the appointment of a commission, that commission to consist of a number of practical railroad men taken out of the service, and a number of practical railroad officials representing the roads themselves, and let that commission be empowered with authority to hold tests, to call for these gentlemen who have this innumerable number of devices, all claiming to be just the thing needed; let them equip cars, put them into service, and let it be demonstrated beyond a doubt as to whether that particular device is the proper one or not. When that is arrived at, then Congress can pass a law requiring the adoption of that particular device within a specified time.

It does not seem to me that it would be just to-day to the railroad employés, to the railway managers, and to the public at large for Congress to introduce a bill, and pass it, compelling a certain coupler to be adopted, when no one knows that there is a coupler to-day that has the requirements in every particular.

I have had some little experience in railroading. I come in contact constantly with the employés day after day, and the general expression of the men in the practical service is, the thing that we want has not yet come.

It is very manifest from the position taken by the president representing the railroad associations to-day that they are adopting a certain plan or a certain style of coupler, and yet upon his own statement he admits that that is not yet sufficiently carried forth as to be warranted in making that the universal coupler.

Now we want legislation. The masses demand it. They are appealing to Congress for it, but we want to be fair to the men who own the property where we are employed, and we do not want to force upon them a device which has not been tested and proved to fill the requirements of the service.

Therefore, Mr. Chairman and gentlemen, I take this position: That the step necessary on the part of Congress is to provide a measure whereby a commission of gentlemen can be selected who can make these tests, and when they have made these tests and have themselves specified that they have gotten an appliance that meets the requirements as to the saving of life and limb, but from an economical standpoint—that wants to be considered also—then report back to Congress or to the Interstate Commerce Commission, or whatever may be designated, and that time will be the proper time to pass an act compelling the adoption of that device.

The CHAIRMAN. Suppose the commission was created for the purpose you indicate. How would that commission be expected to find out what the best device was?

Mr. SARGENT. The suggestion I would make would be this, that this commission after being clothed with authority, request that a certain number of cars be equipped with these several devices, go into some yard where there are intricacies of switches, curves, grades, and put them into practical operation. Let that commission be composed not only of men in actual service, but men who are in the mechanical de-

partment of the railroads, master car-builders, and men of experience in design and invention, and there and then test those appliances to their satisfaction in all the different ways that can be thought of, putting them to all tests, and when they have found the most practical, the most economical, the most life-saving one, I feel satisfied in saying it will meet with universal approval, and very little legislation will be necessary to have it adopted.

I take this position to-day: It is just as much to the interest of the railroad managements of this country to have safety appliances as it is to the employes, and more so, because when employes are injured they get the condemnation if they do not have safety appliances on their equipments every time.

They are looking in that direction. We can see statistics here to-day which they have given us to show they are moving in that direction. Now, the employes ask you to act on this movement in a judicious way. We do not want to do anything unjust. We want to be fair, but we want to hurry this movement forward. We believe a commission should be appointed by this Congress, or an act rather should become a law at this Congress providing for a commission in some way.

Let these tests be made. Let the commission make a report, and when they have made their report, in our judgment, we believe the solution will be solved and the appliances will be found that will meet the requirements, and they will be put on. That is my position, and that is all I have to say.

The CHAIRMAN. You seem to be at the head of the Brotherhood of Railway Firemen.

Mr. SARGENT. Yes, sir.

The CHAIRMAN. Have you had any relations to the switching business.

Mr. SARGENT. I ran a switch engine for some months, and worked in the yard with the men.

The CHAIRMAN. Do you reflect the sentiments of the men themselves who are engaged in that special calling?

Mr. SARGENT. I am not speaking for the switchmen; I am expressing my own sentiments and the sentiments of my colleagues with whom I come in contact, and I form my opinion from conversations I have had with men who have traveled over the country. I am not speaking for any particular body of men. That is not my purpose. I was invited here to give expression of my views.

The CHAIRMAN. The reason I make those inquiries is because I want to find out whether you are familiar with the business, and whether, in the light of your own knowledge on that subject, you believe the suggestions you make are the right ones.

Mr. SARGENT. I will tell you why I believe my suggestions are right with regard to the commission being composed of practical men out of service as well as those who have control and management of the railroads, in order that no one may raise the question that there is any partiality shown towards any particular device on account of the financial backing which that device has.

I am speaking for the employes, and I want them to feel confidence and have confidence and feel assured that their interests are being protected. The railroad employes of this country to-day are looking to you, gentlemen, who have come here, who in a measure represent their interests, and when they feel confidence in what is being done, let men be selected from the rank and file who do the work to act in conjunction

with the men who might be selected from the management of the roads to apply these tests.

The CHAIRMAN. You can understand that if we carry out the suggestions you make we would pass a bill for a commission at this session, and at some future time we would probably be required to enact some additional legislation before we would get to the point of settling what should be done by the railroads, and in the meantime the killing of these men and their injuries would go on, and you think that would be going as rapidly in the direction of protecting the employés as they would think we ought to go?

Mr. SARGENT. Yes, sir; taking into consideration the expressions of the men that there is not a device in existence to-day that meets the requirements, and it being the object of Congress to pass a bill compelling a certain type to become the standard and forcing the railroad companies to adopt that within a specified time.

The CHAIRMAN. Suppose, when we passed the bill, there is no new device. Then what will we do in order to meet the requirements?

Mr. SARGENT. If you have a commission composed of practical men with a mechanical understanding and knowledge, if there are any of those devices that are put to the test that do not meet the requirements, it can be pointed out wherein they are defective. We have had presented to us to-day elaborately a certain type which has been considered practical to a certain extent. They are recommending and adopting it throughout the country. It is applied in the manner I have described, but the question is whether it is practical or what necessary changes could be made in order to make it so. I do not feel that the delay of one session of Congress in the matter of passing this bill would be detrimental to the masses at large. First I believe in finding out what you want, and then passing legislation compelling its adoption. Do not compel the adoption of something before you know whether it is what you want or not.

The CHAIRMAN. I ask you the question more especially because at a previous session I introduced a bill providing for a commission and it was regarded by the country as not the best thing to do. So we have been going along trying to find out what was the right thing to do up to this present time, and we have not yet found out to a certainty.

Mr. SARGENT. I am simply expressing my views as to what I believe would bring about the most practical results. That is only my opinion, and I believe that the railroad employés should be the men who ought to be considered in this legislation.

I am sorry that there are no more railroad men right out of the ranks. What I mean to say is everyday men, men with their hands begrimed with toil, working and handling these cars, who can explain these points that they observe every day. They are not here. I can not speak for them as they can speak for themselves, but I believe when a matter of this importance comes up and you talk of national legislation compelling the adoption of a standard coupler those men should have something to say about it before that law is enacted.

The CHAIRMAN. I thought so myself. Mr. Downey, I believe you are one of those men?

Mr. DOWNEY. I believe so, sir. You can take a look at me, if you please, in order to confirm that. [Exhibiting his hands.]

STATEMENT OF JOHN DOWNEY.

Mr. DOWNEY. Mr. Chairman and gentlemen of the committee, the desire of the switchmen as they have expressed it before conventions on three different occasions was uniformity in the coupler. It does not make any particular difference to them what coupler is adopted. At least they did not express any desire for any one that was in the market. They simply desired some coupler of uniform kind to be adopted by all the railroads. I agree with Mr. Sargent in regard to the proposition he has made that a commission be appointed or a bill be drafted and put through Congress for a commission to test these various drawbars, but in so far as the composition of that committee is concerned I do not believe the switchmen care who compose the committee, even if it is composed wholly of general managers, wholly of car builders, or if it is composed wholly of members of Congress. It does not make any difference to the switchmen so long as a uniform coupler can be adopted, so that the conditions can be known to the men who are at work.

Take a drawbar on cars. They are a good deal like a mechanic's tool to the switchman. If he understands just what he is going to find on the car his danger is lessened to a great extent. But if he finds every different kind of a drawbar there, he does not know the moment he will lose his hand or arm, or even his life.

I do not here desire to advance any theory or anything of that description, and I am not here for that purpose. My practical ideas on the subject are simply that uniformity must be observed in regard to the coupler question, and the sooner you get to that part of it the better it will be for the men who are employed in the business.

We are paying to-day in the neighborhood of \$16,000 a month for deaths and total disability in the organization.

The CHAIRMAN. What organization.

Mr. DOWNEY. The switchmen's organization, the men who do the coupling.

The CHAIRMAN. I think it has been testified here that the Locomotive Brotherhood are paying over \$30,000 a month.

Mr. DOWNEY. They have an organization composed of brakemen, switchmen, and baggagemen, and several other classes in the railroad service, while we are composed wholly of switchmen and are paying in the neighborhood of \$16,000 a month for death and total disability claims.

The CHAIRMAN. Are you paying that out of your own pocket?

Mr. DOWNEY. Yes, sir. Out of the wages that the men draw they pay a pro rata assessment on each death.

Another obstacle for them to contend with is the condition of the tracks in the yards. The frogs are not cleaned and the guards are not cleaned, and various piles of rubbish are allowed to lay around in the various yards of the country and a switchman has very little chance to escape, so that when he goes to work in the morning he does not know whether he will come back alive at night or not.

That was the position I held for nineteen years while I followed the business. I went out in the morning, expecting to come back on a shutter.

The CHAIRMAN. You did not come back maimed all the time?

Mr. DOWNEY. I came home maimed four different times, but they did not kill me.

The CHAIRMAN. Where do you live?

Mr. DOWNEY. Chicago. I have resided there thirty-three years.

The CHAIRMAN. Is there anything in the question of the length and height of the draw bar?

Mr. DOWNEY. They want it uniform all around, height, style, and everything in connection with it.

The CHAIRMAN. What you want is uniformity?

Mr. DOWNEY. Yes, sir; what we want is uniformity.

The CHAIRMAN. So that the cars can be interchanged without difficulty and without endangering life in trying to have it done?

Mr. DOWNEY. I do not know in regard to interchangeability, but if they would adopt one type of draw bar there would be no need of interchangeability.

The CHAIRMAN. Would you think it would or would not be wise to pass a bill providing for a commission to determine anything, or would you prefer that we should provide uniformity by act direct?

Mr. DOWNEY. I think if you could provide for uniformity by act direct it would be the best thing possible. It would get around this business sooner than it would by a commission being appointed. If you have got the power to provide for an act direct, I believe that would be the best way.

The CHAIRMAN. Of course Congress will not undertake to legislate as to a particular kind of coupler. We do not know anything about those devices particularly; but if a device could be so described or there could be such a use of language as to require uniformity in the use of couplers, air brakes, etc., and at the same time leave the railroads open to determine for themselves, it might be done by act without any commission.

Mr. DOWNEY. We are willing to allow a board of railway managers to sit on the business.

The CHAIRMAN. The switchmen are not particular as to how it is arrived at so that uniformity is brought about?

Mr. DOWNEY. No, sir; they do not care who sits on this commission or who acts on this committee that is going to test the appliance.

The CHAIRMAN. Our friend, Mr. Sargent, stated a while ago that the general understanding was that there was no device that was satisfactory now.

Mr. DOWNEY. I guess there are about one hundred. If there were only one of them satisfactory the other ninety-nine could be thrown out.

The CHAIRMAN. You think the adoption of any one of them would be fairly satisfactory?

Mr. DOWNEY. It would lessen the danger 90 per cent.

The CHAIRMAN. Is it or not so that as things are now, this mixing of different types, the danger is more than it was before?

Mr. DOWNEY. It makes it a good deal more dangerous.

Mr. KING. Mr. Chairman, I would like to ask Mr. Downey a question.

The CHAIRMAN. You may do so.

Mr. KING. I would like to ask you, Mr. Downey, if the couplers of the car-builders' type do interchange or couple regularly when they come together or not?

Mr. DOWNEY. With very many in this country you can not unless you use the link and pin, and it is difficult to couple the same type in several yards. I have coupled them only a year ago.

Mr. KING. What is the trouble?

Mr. DOWNEY. I do not know. It is an impossibility for anybody to

tell. They look all right, but they will not lock. It is impossible to bang them hard enough together to get them to lock. Then you have to use the link and pin.

Mr. KING. Do you often have to use the link and pin where there are two different kinds of car-builders' type.

Mr. DOWNEY. Often. I did the west-bound for the Pennsylvania at Fifty-fifth street. I guess on one coupling out of every five of the Master Car Builders' type I would have to use the link and pin to couple it.

The CHAIRMAN. Does the switchman have to jam them together himself in order to lock them?

Mr. DOWNEY. The engine forces them together.

The CHAIRMAN. On two different cars coming together?

Mr. DOWNEY. Yes, sir. You have to go into nine-tenths of them to open them in the first place. They are not automatic, as they seem to be. You have to raise up the lever and have to reach in to open the knuckle in order to couple them.

The CHAIRMAN. If that is so, what good would it do to put them on any car if you can not lock them together except by going between the cars? That is what we are trying to avoid.

Mr. DOWNEY. There are some of them that open automatically, but the majority of them will not—not far enough to allow the coupling to be used.

The CHAIRMAN. Your judgment is that that is not a good coupler?

Mr. DOWNEY. I am not speaking of any particular coupler at all, but am simply stating my opinion.

Mr. LAKIN. Is it not a fact that a car that is loaded coming in contact with a car of the same kind that is light is the cause of their not coupling?

Mr. DOWNEY. I never had time to stop and examine.

Mr. LAKIN. The difference in the height of the car, I should presume, might make some difference.

STATEMENT OF AUGUSTUS D. SHAW.

The CHAIRMAN. What is your relation to railroads?

Mr. SHAW. I am not in the service at the present time, but I have served as a brakeman, conductor, and yardmaster for twenty-six years.

The CHAIRMAN. Were you ever a switchman?

Mr. SHAW. Yes, sir. That is what we call a switchman; a yardman.

The CHAIRMAN. Where do you live?

Mr. SHAW. My home is Indianapolis, Ind. I am residing here at the present time. Two years ago I resigned my position as assistant yardmaster of the Big Four Railroad at Indianapolis, Ind., since which time I have been in the Government service.

When I left the yard ten nights previous to my coming here I laid down the link and pin to accept a position under the Government. I promised the men in the yard there whom I left that whenever I had an opportunity to say anything pertaining to their welfare with reference to this matter of safety appliances I would make it my business to perform that duty. Since I have been here I have been before this committee once before. I have appeared before the House Committee on Railways and Canals and I have been before the commission that was appointed which met at New York last November. I was instructed by the president of the Yardmasters' Association to appear here at

this meeting and express to the members here present their views, which are my own, in reference to this matter.

I have always seen the necessity of a uniform system of drawbars being provided for. Gentlemen, as I said before, my life has been spent in that business and in the most hazardous part of it as a switchman. Ten years of that time has been spent in switching in the yards. I know the dangers pertaining to that and you have before you one who has passed twenty-six years of that service who is living. I will not say that I have escaped without receiving injuries. I have had portions of my finger taken off; I have been squeezed; I have had a part of my elbow nipped off; I have been in collisions; I have been thrown from cars and squeezed between the bumpers, and therefore I speak as a practical yardman knowing something of the dangers of this business.

I was down at Indianapolis a year ago and of course I made it my business to go among the boys again to meet with them. That class of men I have associated with the most of my life. Almost the first words those men asked me were:

Shaw, what are they doing down in Congress in reference to safety appliances?

Here is Bill Gray, last night, who just got his arms smashed off.

There is John Jackson. We want you to go over and see him. He got his foot cut off in a coupling between an automatic coupling and a link-and-pin coupling.

Those were some of the first expressions I heard among those men. I told them that I believed that Congress was in earnest in this matter, and I knew to my knowledge that they were taking evidence and listening to the views of railroad men on this great question, and that I believed they were earnest and felt disposed to do something in reference to this matter.

They feel the need of legislation. They need it, and they ask for a uniform drawbar, a uniform system of coupling, and they ask Congress to provide and make a law to that effect. The Yardmasters' Association, which I represent here to-day, have asked me to make that statement, that they want uniformity and they want legislation by Congress to that effect.

Of course I have my own theory about how that should come about in reference to the drawbar question. I want to state right here, gentlemen, that I would first pass a bill making uniformity, and then let the drawbar be selected afterward. That is where I differ from Mr. Sargent on that question. He and I agree on a great many points with reference to it; we want uniformity and we want legislation by Congress. I believe in passing a bill making uniformity a law, and hereafter selecting a drawbar. In a bill that six months after the passage thereof I would provide for uniformity, and at a certain date and a certain place representatives, say two or three of each of these labor organizations in the railroad service, engineers, firemen, brakemen, switchmen, conductors, trainmen, yardmasters, should meet with a committee of the master mechanics, master car builders, and general managers, and then and there select the kind of device to place on the car. That is what I favor. That is what they want.

If you gentlemen could have seen what I have seen during my life in reference to these matters, the suffering and the dangers which these men have passed through, you would think it was high time that something should be done in the way of giving these men protection in their dangerous duties; and I speak as one who has gone through these great troubles that these men are suffering.

That is about all that I have to say, unless you desire to ask me any questions. I only express myself this way, that they are in favor of

uniformity and that they are in favor of legislation by Congress to that effect. It is not so much the kind of a drawbar as it is a uniform system of coupling.

Mr. MOSELEY. I wish to make a statement. Mr. Spencer Smith has asked me, as secretary of the committee on safety appliances, to hand to this committee a bill which he asks to have introduced, and which is his contribution to this matter. The bill has been prepared by Mr. Smith, has received the sanction, so he states, and as I understand, of Mr. Rogers, and also of Mr. Hill, who are members of this committee of which Mr. Crocker, whom you heard this morning, is chairman. I simply want an opportunity to present that bill.

At 4 o'clock p. m. the committee adjourned until Wednesday, March 2, 1892, at 10 o'clock a. m.

WASHINGTON, D. C., *March 2, 1892.*

The committee met at 10 o'clock a. m., pursuant to adjournment.

Present: Senators Cullom (chairman), Hiscock, Chandler, Wolcott, Higgins, Harris, Gorman, Jones, and Barbour.

The CHAIRMAN. We will hear Mr. King first.

STATEMENT OF JOHN H. KING.

Mr. KING. Mr. Chairman and gentlemen of the committee: I desire to give the committee the result of my investigations and the conclusions which, so far I have been able to reach, and to say to you how the situation looks to me and what, it seems to me, the remedy under the circumstances ought to be. I think Mr. Moseley said something to you about his experience in relation to this coupler question, and I desire to talk on that question only; the other matters are quite simple in comparison with it. The anxiety of the people in relation to this most important question need not be discussed, nor the necessities of the case stated, because you are all familiar with these facts. We are killing a man and wounding about twenty every day under the present system. I think Mr. Moseley also quoted Judge Cooley. I could not help thinking how like my own their experience was in this respect, for when this question first came up and I began to investigate it, it seemed to me that the situation was just exactly like the statements made to you as to how it is now and in relation to what they were doing; that is, that it would soon solve the problem itself.

Mr. Haines in his talk, and some other gentlemen, would have you believe if this thing is let alone it will take care of itself and solve itself very soon. Whether that statement is born of the wish that nothing be done and that they want to be let alone or not, I will leave for others to determine; but instead of its becoming more simplified and there being more likelihood of its being settled than ever, it looks to me from my standpoint that every day it is getting farther from a settlement, getting more complicated and more complex and killing more people, and that in the trend of affairs it must naturally get worse.

Senator HARRIS. Is it true that they are applying this type of coupler, known as the master car-builders' type of automatic coupler, to 30,000 cars a month?

Mr. KING. I tell you how they get that, Senator. Here is a road that will order a great many couplers. Take the Sault Ste. Marie, which is

managed by as good a railroad man as there is in the United States, Mr. Underwood, whom I have known for many years. They purchased the master car-builders' type and equipped all of their cars with it. This was set down as so many couplers "sold and used;" but they discarded the couplers and they are now out of use. That is the way they obtained an estimate.

Senator JONES. Was not that true?

Mr. KING. They bought the couplers, but they are set down as being "in use." Every one of his cars were equipped with it, and every one of them has been taken off and piled up as old iron, because he says they are a failure. Those are marked down as being "in use," and when the car couplers go out as sold they are marked down as being "so many cars equipped," and when they go out of use there is no means of telling how many have been taken off of the cars. That is true all over the country.

Senator HARRIS. Mr. King, is the committee to understand that the railroads of this country are purchasing 30,000 of these couplers a month to be piled up as old iron?

Mr. KING. Yes, sir; some of them are doing it. The men will not have them. They can not use them.

The CHAIRMAN. Why not?

Mr. KING. Because they will not work; they will not interchange.

Senator JONES. They ought not to be used if they will not work.

Mr. KING. The truth is that they will not interchange with other car couplers; they will sometimes. They will work and interchange, and then in the next few hours they will not interchange.

Senator HARRIS. Do they or do they not interchange with each other?

Mr. KING. No, sir; they will not all the time. I do not speak of this because I am in favor of or against any coupler, but I am speaking of this as the trouble that stares me in the face in attempting to come to a conclusion about the matter. For instance, I will read here a letter from the general manager of the Flint and Pere Marquette Railroad. In speaking about that he says:

I must say, however, that the large moneyed interests which certain railroad men have in particular types of couplers will prejudice the selection of a coupler when voted upon by the various railroads in interest, and that the result aimed at, i. e., the safest appliance for protecting the lives of railroad employes, may not be reached on that account.

That is from Mr. Baldwin, the general manager of the Flint and Pere Marquette Railroad Company.

I speak of this not because I have come to a conclusion or have settled in my own mind upon any particular coupler, but here is one railroad company, with their money invested in a coupler; of course they do not want to throw it away. They think that will do as well as any other.

The trouble with the master car-builders' type is that there are so many different types and kinds that when they come to interchange they will not work. That is the trouble that we have found.

The CHAIRMAN. So many different kinds of the master car-builders' type of coupler?

Mr. KING. Yes, sir.

The CHAIRMAN. They are not all alike?

Mr. KING. No, sir. When they are new and everything is all right and the circumstances are favorable and at some particular times the men tell me they will couple, but they say that here is a car or two cars equipped with the Janney and the other with the Gould, and those two

cars will sometimes come together in the same day and they will couple all right, and the next hour or so they will not do it, and the men will have to put their hands in between to make the couplings. Sometimes they do and sometimes they do not couple, and they can not exactly tell why, but the fact is they do not work.

Senator JONES. Are you a railroad man?

Mr. KING. Only by being a railroad commissioner. I have been interested in this question for a good many years.

Senator JONES. You have had no personal experience with railroads?

Mr. KING. No, sir.

Senator HARRIS. What is your remedy for the evil?

Mr. KING. I will try to give you that. My remedy is that some particular type of coupler must, in some intelligent way, be settled by some power other than those directly interested in that coupler.

Senator JONES. Have you any interest in any coupler?

Mr. KING. None whatever in the world.

Senator JONES. You come here as the representative of nobody but yourself?

Mr. KING. I am a member of the committee on safety appliances of the national committee of railway commissioners.

Senator JONES. Do you come here as a representative of that committee?

Mr. KING. Yes, sir; just the same as Mr. Crocker and other gentlemen. I have not a particle of interest, either directly or indirectly, in any coupler.

The CHAIRMAN. You say you are a member of the committee of which Mr. Crocker is chairman?

Mr. KING. Yes, sir.

Senator HARRIS. You say that couplers of this type will not interchange?

Mr. KING. Yes.

Senator HARRIS. The understanding of the committee has been that the coupler of the master car-builders' type has in the last few years been very largely used and that there were from 175,000 to 200,000 cars equipped with them and that they would work interchangeably.

Mr. KING. You must understand that there are some forty or fifty of these types.

Senator HARRIS. There are various specific devices all understood to belong to that type?

Mr. KING. Yes.

Senator HARRIS. You say that will not do; that you have to be more specific?

Mr. KING. Yes, sir.

Senator HARRIS. Does not your theory bring it down to the adoption of a specific coupler?

Mr. KING. It does. That is the difficult problem that you have got to solve, and until you do it in a disinterested, intelligent way, you can not keep from killing the men as long as you have this great variety of couplers.

I have looked over this matter, and, as I said, Mr. Cooley and Mr. Moseley gave me their testimony, and it was this: They thought this was going to settle itself easily years ago; that it was going to be the master car-builders' type. The more we got into it the more complex it became because of the varied interests. The Atchison, Topeka and Santa Fé will not use the master car-builders' type and a large number of other roads will not. The Illinois Central have refused to use it.

They say they can not; that it is constantly killing the men; that they would rather have the old link and pin than this multiplicity of type, and until some particular type of coupler is settled upon, it is all nonsense to try to do anything at all.

Senator HARRIS. I will ask you if any change from the link and pin to an automatic coupler will not, in the transition stage, necessarily increase the danger to the trainmen?

Mr. KING. It can not be any worse than it is. It would not be so bad if they only had one kind of coupler to contend with. They would know what they had to contend with. As it is, they do not know whether it is a Gould or a Janney or a Hinson, or whether it is the automatic link and pin, or the old link and pin, that is coming. They have to make these couplings at night and they do not know what it is, and there is the trouble. If they knew what coupler was being used they could get along. If you had one particular type of coupler they would know exactly what they had to contend with.

In brief, my theory is this: That the only way that you can do and the only way in which this question can be settled is by a commission, which must be composed of railroad men and of others also who have no interest in railroads, because if you took all railroad managers you might get men interested in some particular coupler. If you took railroad employes, who do nothing but couple the cars, it might not be fair to other railroad people. So my theory about this is that it is too big, too intricate a question for Congress to settle, and I will tell you very frankly that I am very much discouraged about getting it settled, and the longer I investigate it and the more I have seen of it and the more testimony I hear about it the more complicated and vexatious and discouraging it is to me.

Why dally about it any longer? You gentlemen can not act intelligently, for it is too intricate a question. Somebody must make a study of it. My theory is—and I have prepared a bill which is identical with Senator Cullom's bill, except the first three sections. It provides that a commission is to be appointed, to consist of seven men (you can make it any number you like), whose duty it shall be first to take the testimony of these railroad companies; take the votes by cars. They will not agree; no 60 per cent, nor 40, nor 30 per cent will agree on one coupler, but take it for what it is worth. Then take the testimony of the men who couple the cars, and take that for what it is worth. Let them weigh it; make practical tests and whatever tests they deem advisable and proper, and travel over the country and give the question their attention, and then let them decide.

Then, for fear that there may be some wrong done, for fear that there may be some mistake made by that commission, and it is a very important matter, I provide in this bill that they shall make a report of their conclusions and findings to the Interstate Commerce Commission, after settling all the questions and taking all the testimony of all railroad employes, and of all railroad companies, and general managers, and everybody. It will be a big job; they can do it within a year. Let them make the report of their findings of what coupler they are agreed upon, and they will have no trouble in finding one good coupler. Then let them report to the Interstate Commerce Commission, and if the Commission approve of what they have done, then let the President issue his proclamation declaring the particular stand or type of coupler. If the Commission do not approve I provide for them to report to Congress, and let Congress have the benefit of their experience and investigation.

Then, in order that you shall not be given trouble about monopoly, that no one man who owns this particular type of coupler may have a monopoly and be able to extort from these railroad companies, I provide that each person who brings his coupler to the commission shall file with it a bond stating for what he will transfer his patent right to the United States, or it can be provided, if you prefer, that the royalty shall be only 50 cents a car or some small amount, so that there will be no extortion, and so that the man who owns the patent can not sit back and say "You can not use my coupler," he having the patent to it. You can provide, if you prefer, that he shall deed it to the United States, and then make it free, or else provide that the railroads shall use it and the royalty shall be 50 cents, or whatever may be deemed proper for its use.

Then, by that means, you prevent extortion; by that means you come to a conclusion, and a legitimate conclusion, and it seems to me it is the only intelligent way out of the woods on this subject.

You gentlemen want this thing to be done as cleanly and as straightforward as it can be done. Congress is charged with having some job in some particular coupler. Now, this commission will have to assume the responsibility and perform the duty, and it can do it. In order that it may be divested of any job, I provide that the commission shall take testimony and report to the Interstate Commerce Commission, and then if the Interstate Commerce Commission agree with them, the President shall issue his proclamation, and we will have the result of it right away. If they do not agree, the matter is to be reported to Congress for whatever disposition seems to be best from the result of their investigation.

The trouble about this matter, as I have said, is the great interest that has already become invested. The Pennsylvania line, for instance, is using only one particular type of coupler——

THE CHAIRMAN. What is that?

MR. KING. One type. I do not know whether it is the Janney or not.

MR. MOSELEY. Yes, sir; it is the Janney type.

MR. KING. Now, then, what they would like would be to compel every other railroad to use that particular type of coupler. They want to bring every other railroad company to their manner of thinking, and the other companies say, "Our judgment is as good as yours and we will not come to your way of thinking and you can not drive us." That is the disposition of the railroad managers. They do not want legislation. They fear there may be a mistake in the selection of the coupler or that they will be compelled to throw away their investments. For instance, the Pennsylvania, if some other type of coupler should be adopted, would have to change their cars. The Santa Fe, if some other coupler were to be adopted, would have to change theirs. They use the automatic link and pin. They say it is the best. I do not know anything about what is the best. I know there is enough in the record and the investigation we have made and the testimony that has been taken to convince me that there is no man in this country who is egotistical enough to stand up and say, "Here is the identical coupler that will satisfy everybody." I would not want to take that responsibility. If you have that responsibility put upon you, Mr. Chairman, you would discharge the duty just the same as any man would discharge his, and do the best you could, and then we would get a uniform coupler.

This bill, as I say, is the same as that introduced by Senator Cullom, with the exception of the first three sections. I want to say a word to the committee further in relation to this matter.

Of course I know there is a feeling of economy pervading the country at this time, but there is no question before Congress which is as important as this. We are killing a man every day. They all admit that if we had a uniform coupler that would be reduced 90 per cent. Railroad men, employes and all, agree that if we had one automatic coupler that would be reduced 90 per cent. I think that is the uniform testimony.

The CHAIRMAN. The railroads are killing a man a day, and about how many are being injured?

Mr. KING. Twenty a day. They have killed 40 or 50 men since you began considering this question this Congress, and on an average 20 a day have been injured. All of them say the reason is because they do not have some identical, uniform coupler. How are you going to reach that question? No man can intelligently get Congress to say what it ought to be. You would not feel like saying what particular type should be adopted without knowing more about it than you do. It seems to me that it would be folly to ask Congress to settle it. The railroads can not settle it. Here is one railroad manager who practically says I am right. Railroad men are stubborn people. They are intelligent; they are strong. The manager of the Santa Fé says "I know just as much as the manager of the Pennsylvania." The master car builder, or who ever he is, on that line says "I know just as much as they do. That is not the thing I want. I want some other type." I think the Santa Fé uses the Safford coupler. I know nothing about the types. They have got their interests established and you can not drive them. They can not agree; they just simply will not agree. You have got to get a jury or some person to sit upon the question and compel them to agree, and you never will arrive at any conclusion until that is done in some way so that they are compelled to agree by some positive statute, providing for prompt action.

Two or three years ago I find that the master car-builders said they settled this and that and they fixed this and that. I find that while these companies, the Pennsylvania line and a few of those lines, have adopted the recommendations of the master car-builders, yet they are manufacturing other types and putting them on all the time. There are certain companies that have adopted that type; but there are others that will not. The Grand Trunk absolutely refuses to use it. There are a dozen or fifteen of the biggest roads of the country that refuse to use it.

The CHAIRMAN. Suppose we should say that there should be a system of coming to a conclusion and providing for the adoption of some specific coupler, how long a time do you think the railroads ought to have in order to comply with the law?

Mr. KING. I think that they would be able to equip from 10 to 15 to 20 per cent per year.

The CHAIRMAN. It would involve the necessity of throwing away a good many couplers?

Mr. KING. Certainly. They are constructing more cars. I think I am right, I have not the statistics to back me up, Mr. Moseley could tell better—I think they are constructing three times as many cars in the United States that have not the master car-builders' type as those that have the master car-builders' type; while they are equipping one-third of the new cars with master car-builders couplers the other two-thirds are equipped with different kinds. I tell you that the determination of the railroad companies of the United States to have their own way, each railroad for itself, is three times as strong as it was when I com-

menced to investigate this thing. The Pennsylvania company have got their million dollars invested in this and they say they will not use any other. The Santa Fé says the same thing as to the coupler they use. The Grand Trunk say they will not use the master car-builders' type. There are railroads by the dozen over this country who say they will not use it, and they stand there with their teeth set and their fists clenched, and that is the situation. They say, "We will fight." You can not get away from that. This has been going from bad to worse. The number of men being killed every year has been increasing.

Senator GORMAN. Where do you get the statistics about that?

Mr. KING. By taking the statistics of 1887 and bringing them right up, you find that the number of killed is increasing; that we are killing one man every day.

Senator GORMAN. Where is that information gathered?

Mr. KING. In all the reports of people killed. We have them here.

Senator HARRIS. At what point is it concentrated?

Mr. KING. In the report of the Interstate Commerce Commission; it is authentic. There is no disagreement about that. They concede that point; they agree.

Senator JONES. That it is getting worse?

Mr. KING. Yes, sir; all the time. There is not a man who can stand up before you and say that is not so.

Senator JONES. Is the number of men killed in proportion to the mileage of railroads increasing?

Mr. MOSELEY. Yes, sir.

Mr. KING. All the time.

Senator JONES. If that is so these improved couplers are doing more harm than good?

Mr. KING. I think the report will show that even the Pennsylvania Railroad, which must handle the cars of other companies, is killing more people now than they were before, by reason of the different cars coming to them with other varieties of couplers.

Senator HARRIS. Will not that necessarily be the case? Even though we should decide to-day that the railroads should adopt a specific coupler, in this transition state, while some of the cars are equipped with one coupler and others with another, will it not naturally increase the casualties on the road?

Mr. KING. I think it would commence to decrease immediately. I will tell you why. Here is the Illinois Central; there are forty or fifty roads that I might speak of which are refusing to put on any automatic coupler at all. They are using the old link and pin. Of course these other cars come to them equipped with the different variety of automatic couplers. As soon as this question would be settled and it was determined what particular type should be adopted, all the railroad companies in the United States and all the car manufactories would begin to equip their cars with that coupler, and in less than one year the change would be very marked; because it is the testimony of the railroad employes and managers that the trouble comes from the great variety of couplers, because they do not know what is coming. All these varieties will immediately commence to disappear, and we would have one particular type. I think the others would commence to disappear right away.

I have talked with these men and they all agree that it would practically reduce it down, some say 80 and some say 90 per cent, if we had one particular kind of coupler. I want to say that there is a large number of couplers not upon any cars that I believe to be just as good

as any that have been put upon cars. By reason of poverty the men who have invented them have not been able to get a fair test. The commission which is provided for in my bill, if appointed, could have practical tests made. They would very soon begin to winnow them out. They could take this type or that. They could make tests upon a half a dozen of the best types, and when the tests were made and they finally selected one particular kind of coupler, then you would see all the railroads of the United States adopt it with alacrity. They would say, "We are not contending with the Atchison or the Pennsylvania, but with the action of Congress, with a law," and they would abide by it with all grace and speed.

I present to you the bill which is the result of my careful investigation. It is only good for what it is worth. It is in favor of no man's coupler and in favor of no line. We want to get this question solved. Railroad men can not solve it. You can not get a railroad man to tell you that he wants the Congress of the United States to pass a law to solve it. The railroads can not solve it. As Mr. Baldwin says, the large moneyed interest which certain railroad men have in particular types of couplers will prejudice the selection of a coupler when voted upon by the various railroads in interest, and that the result aimed at, the safest appliance for protecting the lives of railroad employes, may not be reached on that account. That is the milk in the cocoanut of this whole matter.

My bill is numbered 6187. I had Maj. Pickler, of South Dakota, introduce it. It is just exactly like Senator Cullom's bill in all of its details except the first three sections. I provides for a commission of seven, and the Congress of the United States can well afford to be lavish in an appropriation of money for taking up this matter and disposing of it and getting some head to it, and the only way I can see is for some disinterested, high-minded commission to have the authority to act and who will report their findings to Congress, if it is not settled by the approval of the Interstate Commerce Commission.

Senator BARBOUR. I understand the gentleman to say that the railroad managers are interested in couplers?

Mr. KING. Yes.

Senator BARBOUR. I think a sweeping charge of that sort ought to be more specific. So far as the Southern railroad managers are concerned I am satisfied it is not so.

Mr. KING. The Senator was not present, I think, when I made the proper preface to that.

Senator BARBOUR. I do not believe that the Baltimore and Ohio people are connected with any coupler.

Mr. KING. I only get this from the testimony of railroad men. They tell me that railroad managers are interested in particular couplers.

Senator HARRIS. You mean in patents?

Mr. KING. Yes.

Senator HARRIS. I understood your allusion to be that the railroads had money already invested in particular couplers which were on their cars.

Mr. KING. That is the main thing. A line has adopted a particular coupler and they have got their money invested in that particular coupler, and, of course, they do not want to throw their money away.

Senator BARBOUR. I do not see how any railroad managers could properly be interested in any patent or any device they may be using on their lines.

Mr. KING. The only reason I have for thinking so is the testimony of railroad men.

Senator BARBOUR. I know the Janney coupler, one of the leading ones, is owned by outside parties, and they had hard work to get it introduced.

The CHAIRMAN. What is your business now?

Mr. KING. I have been a railroad commissioner of South Dakota for a number of years and occupied that position when I was placed upon this committee by the railway commissioners' convention. I have been associated with Mr. Crocker, of Massachusetts, in connection with the investigation of this question. I have no interest in any corporation, person, or thing in any way, directly or indirectly. I am a lawyer by profession. I am, at present, in the Treasury Department of the United States.

Senator WOLCOTT. As a clerk?

Mr. KING. As chief of division.

Mr. COFFIN. How long were you a commissioner?

Mr. KING. Three years. I asked to be relieved from service on this committee, but Mr. Crocker insisted that I should remain. I resigned my position as a railroad commissioner.

STATEMENT OF L. S. COFFIN.

Mr. COFFIN. Mr. Chairman and gentlemen of the committee, I stand before you feeling a good deal embarrassed and still a great responsibility, as the letter that I handed the chairman informs him of the position I occupy.

The CHAIRMAN. I will read a part of the letter to which Mr. Coffin refers:

I have to-day caused to be forwarded to Hon. L. S. Coffin, of Iowa, who is representing our organization at Washington a supply of annual reports and other printed matter, with the request that the same be distributed among the members of your committee.

That is from Mr. W. A. Sheahan, grand secretary and treasurer of the Brotherhood of Railroad Trainmen. I read this clause of the letter to show Mr. Coffin's relation to the subject.

Mr. COFFIN. Mr. Chairman, I do not stand here to urge you to do your duty. You are just as ready to do your duty as I or anybody else. What you want of me is all the information you can get out of me, and I stand here to give you everything that I possibly can that will help you in this matter. I have had some opportunities to gain information in this matter, and I will just say that I was for five years one of the railroad commissioners of Iowa. I became early interested in the matter of safety to these men, and I put myself in the way to find out everything that possibly could be found out in regard to the matter. I have been present at every brake test made in America since 1883 and at nearly every coupler test that has been made.

I want to lay some facts before you that have not been placed before you at all, and it is surprising that some of the railroad companies have not laid these facts before you. In the first place let me say there is a demand for this legislation. I took up the World, printed in New York, yesterday, and I found there an editorial in regard to a coupler job before Congress, and saying that the attempt to get legislation was a coupler job to enrich a lot of coupler folks. Let me just show the perfect lack of foundation for anything of the kind. There are in this nation now twenty-

eight States that have the system of railroad commissions. Those States unanimously in the conference of the railroad commissioners asked Congress to act on the matter. Besides these some of the States that have not the railroad-commission law have voluntarily passed resolutions, sending them to Congress, asking Congress to act. Here is a large majority of all the States and they have asked Congress to enact legislation on this matter. There can not be any job about that. You can not think of that thing.

Here is another point. There is at this time, and it is a most opportune thing, too, an inevitable necessity before the railroads of the United States. What is it? It is that there has got to be a change in all their drawbars, aside from the question before us. They have got to do that. Why? You and I all know that the freight car of to-day is of about three times the capacity as compared with what it was ten years ago, when it was 10 tons; now it is 30. We all know, too, that the weight of an engine is something like two or three times what it was ten years ago. Hence the strength of the connecting device between the trains must be increased, and the everlasting breaking of the link and pin is causing wrecks and loss of life. You say, can they not increase the strength and the size of the links? No, they can not do it. Suppose the Baltimore and Ohio should go to work and say they will do that. In order to make their pins larger they have to have a drawbar with a larger hole. They have got to have a drawbar with a larger mouth for the link to enter, and all other roads have to do that or else the cars are not interchangeable. They have a standard link and pin all over this nation, and you go on any freight train you please and go into the caboose and you will find there hundreds of pounds of links and pins to meet emergencies. They are all exactly alike; they are standard; they are not strong enough to meet the exigency of the service at this time. Hence there is going to be, there must be inevitably, an entire change of drawbar on all the freight cars in this nation. Every railroad man will say that I am right in regard to that. Trains breaking in two is very expensive and very dangerous.

Allow me to point to a very recent object lesson. The public are not aware of it. The whole country was shocked at the terrible accident on the New York Central Christmas eve. The public have no idea of what was the original point to that accident where so many lives were lost. I will tell you. A freight train was on that track, and in starting up to get away from the coming passenger train it broke in two, because of a link-and-pin coupler. That delayed the first passenger train, into which the second passenger train ran with such terrible results. The breaking of the freight train in the first instance, you will see, caused the wreck. I went to Mr. Toucey. I came on to New York to find out what kind of coupler was used. I asked him. He said, "I had not thought of that; it is a very important point." He called a man in, one of the superintendents, and asked him. He did not know. He ordered him to get the information, so that when I called the next morning I could have it.

Let me say right here, while I am speaking of Mr. Toucey, that he said to me, as I left his office:

Mr. Coffin, if you can get legislation through Congress on this matter, do not make it over five years for all the cars to be equipped with safety couplers in this nation. We can do it in that time. We want to do it and we want to have it done.

The CHAIRMAN. What is his relation to the New York Central Railroad?

Mr. COFFIN. He is general manager of the New York Central. The

railroads themselves have been making great effort to meet this difficulty and this demand.

I am surprised, Mr. Chairman and gentlemen of the committee, at the statements made here by the gentleman who preceded me. I want, in order to throw some light upon the question that he has brought up and the assertions he has made, to have you go with me briefly and slowly up to the point we are now, of the efforts of the railroads themselves to get a uniform standard coupler. Mr. King said that you can not get the railroads to agree. I have the reports here of the Master Car-Builders Association from 1887 up to their last convention, that of 1891, held at Cape May in June last. I want to say that each member of that association has his name here [indicating in book], the road he represents, the number of cars he represents, and from this statement [indicating] it will be seen that the number of cars represented in that association at their last meeting was 991,564—practically a million cars. You all know that that about takes in all the cars there are in this nation. You take the reports and go clear back. Here is the report of 1887, when the Master Car-Builders National Association met at Minneapolis, Minn. There they adopted the report of a committee on safety appliances, and especially on couplers.

The CHAIRMAN. How is this association composed?

Mr. COFFIN. It is composed of such men as Mr. Ely, who was before you. Then there is the Master Mechanics' Association and the Master Car-Builders' Association, and very often the master mechanic is a member of the car-builders' association and *vice versa*. It is made up of these master car-builders and master mechanics.

The CHAIRMAN. Of all the roads?

Mr. COFFIN. Of all the roads. There is never less than 90 per cent represented. They are sent there by the railroad managers. It is an absolute necessity to have that association. They meet together to decide upon standards of everything connected with the making of an engine or the making of a car.

Senator WOLCOTT. Does it include car-builders who are not officials of railroads?

Mr. COFFIN. It takes in some, but only those representing cars have a right to vote.

I say it was an absolute necessity to have that association, when these little roads, all over the nation, some twenty or thirty years ago, began to combine to make through lines so that cars went all over. Then it was found to be absolutely necessary to have the men who had charge of the repairing of the cars make arrangements for the repairing of the cars, as they would be all over the nation, so that if a car belonging in Portland, Me., is found in Portland, Oregon, with a broken axle-tree it is taken in the shop there and they have an axle tree just exactly like it. It is a standard. They have decided upon it, and that axle-tree can be put into the wheels and the car sent home. You see at once how it works.

These master car-builders (I wish you had time to examine the plates showing the exact size and dimensions) are carefully doing this. If you could look at the plates you would see how careful they are and how important it is that they should be so. The railroads send these men there; they pay their expenses; they take them two weeks away from their work and send them to this convention for the very purpose. At the Minneapolis convention five years ago, after years of experimenting and tests, and I attended some of these tests of couplers, a report was made and the association adopted that report by a two-thirds vote,

and that has to be so. After that, as I said before you two years ago, that does not fix it. The action of the master car-builders has to be sent to all the managements of the roads represented in that association and if, after ninety days of consideration, they, by a letter ballot, approve of the action of the master car-builders in that particular thing by a two-thirds vote that particular thing becomes a standard for all the roads of the nation.

Now, that took place in the fall of that year. The letter ballots were returned to the secretary of that association, and there were fourteen more than a two-thirds vote.

Senator GORMAN. You mean to say that they agreed upon a particular coupler?

Mr. COFFIN. A certain type; no one particular coupler. That type was named the Janney type. After the return of the letter ballots, so that the master car-builders knew what to do, by order of their managements the executive committee was instructed to get a coupler of this kind, look it over, test it, and examine it, and change its lines, if it need be, and then publish to the world the contour lines and the size and shape of that coupler as the standard coupler of the railroads of this nation.

They did that. They found in their investigations that there were certain patents upon the contour lines of the coupler that they had chosen, and they could not go any farther unless the patentees would surrender those claims to the association, which was done, and they were surrendered to the railroads of this nation.

Mr. KING. You are in favor of legislation specifying the master car-builders' type?

Mr. COFFIN. I favor legislation that shall put into use what the great majority of the railroads have adopted.

Mr. KING. That, you say, is the master car-builders' type?

The CHAIRMAN. Mr. Coffin had better be allowed to conclude his statement.

Mr. COFFIN. I want to explain to you—I must go right to that point—the wonderful anomaly that has come up before you, what Mr. King has said, that the master car-builders' couplers will not couple with each other, and that the railroad boys do not want them; that they would rather have the link and pin. That is all very natural, as you will see it. I want to say before I come to that in all these reports of the Master Car-Builders' Association and conventions there is not a single attempt to do away with that standard, but to make it still stronger and stronger every time.

Now, as to the adoption of this standard—remember, it is a type, not a particular coupler—the makers in making these couplers, some of them, having ideas of their own, changed the patterns a little and the patterns would become a little changed in moulding, and by and by it was found that sometimes two of these same couplers would not couple together.

The CHAIRMAN. With each other?

Mr. COFFIN. Yes, sir; with each other. That came up for discussion in their convention, and in 1890 a committee was appointed whose business it was to examine into this matter. One of the committee lived at Buffalo. This committee was authorized to send out to every manufacturer of master car-builders' couplers and have him send a coupler and a drawing of his coupler to the chairman of this committee in Buffalo and then the committee would examine all of them. Here is the drawing of the master car-builders' coupler [exhibiting]. They

would apply these specifications to all these couplers and see how much they differed and see where the difference was. There were 18 couplers sent to them. Let me set you right in regard to the wonderfully wild assertions which have been made before the committee that there are several hundred of the master car-builders' couplers, all alike. There were but 18 manufacturers of the couplers of the master car-builders' type who had couplers they could send there. There were 6 or 7 others who sent specifications and drawings of a coupler they had in embryo. This committee applied the test. It would be interesting to see how they varied from the standard contour lines, if the committee had time to go into the matter.

This committee reported to the convention of 1891 at Cape May the variations there were and showing why the couplers would not couple. The committee was then instructed to get templates and gauges and furnish them to every manufacturer of the master car-builders' type of coupler and to the railroads, so that they could apply them to every coupler that came to them for sale. A firm in Connecticut, some of you may be acquainted with it, the Pratt & Whitney Company, of Hartford, who are manufacturers of very fine work, were employed to make these templates, the gauge to be made of the hardest kind of tool steel. The manufacturers of this type of coupler were furnished with these gauges and the railroads were also, so that now there may be twenty or thirty of the master car-builders' couplers manufactured, and every one of them, in the hooking point, is exactly alike, and every one will couple under every conceivable circumstance in railroad service. I was surprised to hear some of the statements. They were made because the gentlemen do not know these things. Here [exhibiting] is the circular sent out by the committee giving the form of gauges and showing where they can get them. That was sent to every master car-builder.

Senator WOLCOTT. Let me ask you a question. If it is a fact that the master car-builders' type has been adopted by the railroads, and that they are finally getting to work on the proper basis, what is the need of legislation?

Mr. COFFIN. I will come to that.

Senator WOLCOTT. Let us get to that. That, I suppose, is what we want to hear.

Mr. COFFIN. I do not want to omit anything that you may want to have before you.

If you will allow me to delay answering that a little I want to refer to the wonderful pains they have taken to arrive at this thing properly. In 1885 they advertised to the world that their committee would be at Buffalo to test couplers, and asked all parties who had a coupler that they thought would meet the emergency to come there with two cars equipped with them. I was there, and for two days the experts handled the cars. There were some fifty-odd couplers. A great many more sent models that they would not examine. Then, after the two days of tests, the committee retired to a room and invited some of us to come in and hear the discussion on the tests. The fifty couplers were cut down to twelve. Those twelve were recommended to be continued for trial, this road agreeing to take fifty couplers and put them on their cars and use them and keep an accurate account of their service and how they worked, and another company agreeing to take fifty of another style.

Then, at their next convention these were reported upon, and they were cut down still more. At their next convention at Minneapolis, in

1887, they were all cut down to one type of coupler; not one coupler, but one type.

I dwell on this for the purpose of showing to you that if you create a commission it has got a long job before it. These men, with all the facilities that they had, and which no commission can have, have been for years arriving at what they have now come to, and have got a practical thing, so they think—and who has a better right to think that they have than they themselves—and they are sustained by their roads.

Senator HARRIS. Without going into the details as to how the railroads have arrived at the conclusion, is it a fact that the great majority of the railroad companies of this country have agreed upon a type of coupler?

The CHAIRMAN. A specific device.

Mr. COFFIN. Yes, sir; a type.

Senator HARRIS. Is it a fact that each specific device belonging to that type will couple and uncouple with another of the same type?

Mr. COFFIN. Yes, sir.

Senator HARRIS. Is it a fact that the great majority of the railroad companies recommend the adoption of that type of coupler?

Mr. COFFIN. Yes, sir.

Senator HARRIS. Is it a fact that the roads are proceeding with reasonable expedition to adopt the coupler of that type?

Mr. COFFIN. The majority of the roads are; not a very large majority, but a majority.

Senator HARRIS. I would be glad to know, then, if there is any necessity for legislation on this subject, and why?

Mr. COFFIN. There are certain roads, as Mr. King said, that will not do this thing unless they are compelled to by law. Take the Gould roads. They will not do a thing until the law compels them to do so.

The CHAIRMAN. What proportion are the Gould roads to the entire mileage of the country?

Mr. COFFIN. They are a small minority.

The CHAIRMAN. Are there any others who would refuse to put on the couplers until compelled to do so by legislation?

Mr. COFFIN. There may be some few. I want to explain to you about the Sault Ste. Marie road. That road has an immense amount of Canadian traffic. It has to take the Canadian cars, which are equipped with the old link-and-pin couplers. Now you see why they do not adopt the master car-builders' coupler.

Senator GORMAN. Does a patent cover any portion of the master car-builders' coupler?

Mr. COFFIN. Yes, sir; some portion of it. It is now so common, however, that it is just a matter of manufacture and sale, as with any other thing. As Mr. Ely said the other day, it is just like the manufacture of a hoe; the patents do not cut any figure in it whatever.

There are some roads that will not do anything. Pardon me if I say this, but roads that are more for Wall street than for actual work among the nation will not do anything.

Senator WOLCOTT. What do you mean by that?

Mr. COFFIN. Roads for speculation.

Senator WOLCOTT. Are not all railroads carriers.

Mr. COFFIN. Yes, sir.

Senator WOLCOTT. What do you mean by railroads being for Wall street and not for the people? I wish you would designate them.

Mr. COFFIN. I suppose it is a matter of common intelligence.

Senator WOLCOTT. I have not enough common intelligence to know

what railroads are for Wall street and what railroads are carriers for the people.

Mr. COFFIN. Probably it would not be best for me to specify them. We have those things in our minds, I think. Mr. King has spoken of the interest managers have in these couplers.

The CHAIRMAN. You have not quite answered the question of Senator Wolcott or of Senator Harris on the question of the necessity for legislation.

Senator HARRIS. Is legislation necessary; and if so, exactly what legislation?

Senator WOLCOTT. Why?

Senator HARRIS. And why.

Mr. COFFIN. To my mind legislation certainly is absolutely necessary to reinforce (perhaps that is the word I want to use) the majority of the roads that are trying to get a uniform coupler all over this nation for the safety of their men. That is what we want. There are some roads that will not do anything, that are not doing anything. We know that a great majority of the roads are doing something. Mr. Haines said right here that his association, representing 122,000 out of 170,000 miles of road, have adopted it as a settled policy to put the master car-builders' type of coupler on every new car and every repaired car, and on all others as fast as they can. Here is a large majority of the roads doing this very thing. But the others can not. They do not. I can not tell why.

The CHAIRMAN. What progress is made from year to year?

Mr. COFFIN. During the last year there has been a wonderful progress, as Mr. Haines showed you by the diagram. It runs up very rapidly. There has been in the last year a larger number adopted than in any two or three years before.

Senator JONES. During the last year have any roads which have not heretofore used that coupler adopted the master car-builders' type?

Mr. COFFIN. I am not prepared to name the particular roads, but I have been told that there are some who have.

Senator JONES. Then is it likely that in the coming year there will be other roads who have not done it heretofore who will adopt these couplers?

Mr. COFFIN. I have no doubt of it.

Senator WOLCOTT. Do you appear on behalf of the majority of the railroad companies asking that the minority be coerced into doing this? Do you understand that the railroads representing a majority of the total mileage of the country are in favor of some legislation that will compel the minority to do what they, the majority, are already doing?

Mr. COFFIN. I am not here in the interest of the railroads *per se* at all. I am here in the interest of the employes.

Senator WOLCOTT. Do you understand that the majority of the railroads desire the minority to be coerced into doing this?

Mr. COFFIN. They do not want any compulsory legislation.

Senator WOLCOTT. The majority do not need it because they are already putting on the couplers?

Mr. COFFIN. Yes, sir. If we had all such roads we would not want any legislation. Mr. Haines thinks that the moral effect on the other roads will bring them into line. It has not brought them in yet. He says that by refusing to take cars that are not equipped with automatic couplers they will be compelled to come in. In your investigation only a few years ago you did not find a single instance where the general managers kept their agreements in regard to pools. Now, suppose you

take the Standard Oil Company, which has not a single automatic coupler on any of its tank cars. Suppose the Standard Oil Company says to the Baltimore and Ohio, or the Pennsylvania, "You must take our cars or we will go to the Michigan Central." There has got to be a good deal of backbone on the part of the managers to refuse to take that traffic. It can not be done. Competition will upset any of these agreements, and it is only by the stern say-so of the law that these men will ever be brought into line. Mr. Rockefeller is a grand man, yet I do not see any sign of his equipping his cars with automatic couplers.

I am not talking at random. Two years ago I prepared a bill and presented it and secured legislation in Iowa. It was passed in the senate without a single dissenting vote. In the house there were two or three. I have a letter from Mr. Ives, president and general manager of the Cedar Rapids and Northern Railroad, having some thousand miles, in which he says that they are equipping their cars according to law, and at the end of his letter he says:

I do hope, Mr. Coffin, as we have started in on this line, that you can get national legislation to bring all the roads into line.

That is his letter. I have it here now.

The CHAIRMAN. What kind of a coupler does he put on his cars?

Mr. COFFIN. The master car-builders' type. He has two or three different kinds, and he says he sees no trouble at all, that they operate nicely.

Now, again, let me tell you what Mr. Whitman, the general manager of the Chicago and Northwestern, said to me the other day as I came through Chicago. I think he said that on the Lake Superior line, which was equipped with that kind of coupler, "we run solid trains equipped with master car-builders' type of coupler and absolutely"—he brought his fist down on the table—"and absolutely there are no breakages at all, and no injuries at all where they run solid together."

Senator GORMAN. If that is so is it not sufficient inducement for the other railroad companies to adopt it?

Mr. COFFIN. I should think so. Let me explain one thing right here, Mr. Senator. The managers may be all right, the superintendents may be all right, and probably they would like to equip their cars with these safety appliances, but the owners of these roads have to vote, through their directors, and the ownership probably is absenteeism, across the water, where you can not reach them all the time. The managers may go to these boards in vain, and unless there is a law they can not get the appropriations to put on the appliances. That is one of the necessities for the law. If it were all home work there would be no trouble, I think.

Senator GORMAN. Is not the whole thing an experiment up to the present time?

Mr. COFFIN. It is now beyond the experimental stage.

The CHAIRMAN. As to the proper coupler?

Senator GORMAN. As to the proper coupler. Here is the Baltimore and Ohio with a dozen different couplers. It insures all of its employes. It is a home road. It is owned by the people right around there—

Senator BARBOUR. Do they not get the insurance fund out of the employes?

Mr. COFFIN. The Baltimore and Ohio is equipping every new car with this same type of coupler just as fast as they can, and every repaired car is being equipped with them. Mr. Geives, I think that is

his name, is the master car-builder, and he has been ont his committee to urge the Master Car-Builders' Association to adopt this coupler. I am very well acquainted with him.

Senator GORMAN. All the new cars are to be equipped with these couplers?

Mr. COFFIN. The new cars and the old cars, as fast as they can get the means to do it. It makes no difference whether it is the Hinson or the Gould, or the Janney.

Now let me give you another instance. On the Chicago, Burlington and Quincy road in 1887, there was a gravel train equipped with some twenty or more cars of the master car-builders' couplers, and eight or ten with the old Porter drawbar, the strongest link-and-pin coupler there is. That gravel train has made a mileage of over four times round the world, and there has not been a single breakage in the master car-builders' coupler.

I bring this up to show to you gentlemen that you can not make a mistake in legislating in the direction in which the great majority of the railroads have gone and gone so carefully.

The CHAIRMAN. What kind of legislation do you want?

Mr. COFFIN. If you will pardon the egotism that Mr. King referred to, I will read to you one or two sections of a bill that I have prepared and had introduced in the House. It would have been introduced in the Senate, but Senator Allison introduced the bill which was introduced at the last session instead of this one, which I submit to the committee with the amendments I wish made in it:

The bill is as follows:

A BILL providing for a uniform system of coupling cars and controlling railroads trains, for the greater safety of railway employees.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That from and after the passage of this act it shall be unlawful for any person, company, or corporation operating a railroad in this nation to put into use any new locomotive for the purposes of interstate commerce that is not equipped with a proper power brake.

SEC. 2. That on after twenty-four months from the passage of this act it shall be unlawful for any person, company, or corporation engaged in the movement of cars on any railroad to facilitate interstate commerce to use any locomotive engine to move such cars that is not equipped with a suitable power brake, or with what is commonly known as a "driver brake."

SEC. 3. That no person, company, or corporation can lawfully, after the passage of this act, put any new car, or car that has been to the shops for general repairs, or which has to have one or both of its drawbars replaced by another, into use on any railroad for the movement of interstate commerce which is not equipped with suitable safety couplers.

SEC. 4. That it shall be unlawful for any person, company, or corporation in the United States which may be engaged in interstate commerce to use any car in the movement of such commerce after January, eighteen hundred and ninety-seven, that is not equipped with proper safety couplers.

SEC. 5. That it shall be unlawful for any person, company, or corporation that is now or may hereafter be engaged in the movement of interstate commerce to run any train of cars in such work after January first, eighteen hundred and ninety-five, that has not a sufficient number of cars in such a train so equipped with power or train brakes that the engineer on the locomotive drawing such train can control the speed of the train without requiring brakemen to use the common hand brake for that purpose.

SEC. 6. That the main design of this law being this, namely, greater safety to employees in handling cars and running trains which may be engaged in moving interstate commerce, it requires all persons, companies, or corporations owning or using such cars and trains to adopt a uniform system of coupling and uncoupling such cars, and it enforces upon all such parties engaged in interstate commerce the universal use on all their cars of the standard type of safety couplers as established by the majority of such persons, companies, and corporations, through the American Railway Association, the National Railway Master Car-Builders' Association, the

Railway Master Mechanics' Association, or any other representative association of railway officials representing the majority of the mileage and a majority of the freight cars of the railroads of this nation, as shown by the published reports and records of the regular conventions of any one or all of these associations, now extant or that may hereafter be published by them. And the so-called safety couplers mentioned in this act must be uniform in their action so as to be interchangeable upon all the cars on any railroad engaged in the interstate commerce, and they must be such as will not require the men to stand between the ends of the cars when the act of coupling is done, or require them to go between the cars to uncouple them when in a normal condition. And the intent, meaning, and design of section five of this act is to require that all freight trains engaged in interstate commerce shall be so equipped with power or train brakes which can be manipulated by the engineer drawing such train, so that he can control such train with the same safety to the freight-train men as passenger trains are now controlled by the engineer drawing them with safety to passenger-train men, as far as the manipulation of brakes is concerned.

SEC. 7. That when any person, company, or corporation engaged in the movement of interstate commerce by railroad shall have equipped 50 per cent of its cars with said couplers, a sufficient number of cars with power brakes so as to meet the requirements of this law, it may lawfully refuse to receive from connecting lines of roads any cars that are not equipped with such safety couplers and power or train brakes as will work and readily intercouple with the couplers and brakes in use on its own cars, as required by the provisions of this act.

SEC. 8. That any person, company, or corporation engaged in interstate commerce using any locomotive, car, or trains contrary to the provisions of this act shall be held prima facie guilty of gross carelessness, and shall be absolutely liable for all injuries to their employees, or other persons, that may result from handling or working with such locomotive, car, or train, being in use contrary to the provisions of this act.

SEC. 9. That any employé of any person, company, or corporation engaged in interstate commerce who may be injured by any locomotive, car, or train in use contrary to the provisions of this act shall not be deemed guilty of contributory negligence although continuing in the employ of such person, company, or corporation after the habitual unlawful use of such a locomotive, car, or train had been brought to his knowledge.

SEC. 10. That any person, company, or corporation using any locomotive, car, or train in interstate commerce contrary to the provisions of this act shall be deemed guilty of misdemeanor and liable to a fine of five hundred dollars for each and every offense, collectible in any district of a United States court where the offense may have been committed.

SEC. 11. That every person, company, and corporation engaged in interstate commerce by railroad shall include in their annual report to the Interstate Commerce Commissioners the number of freight cars owned and controlled or leased by them, the number equipped with safety couplers, and the name and make of the couplers used, the number of freight cars equipped with power or train brakes and the name and make of such brake, and also the number of locomotives owned and used and the number equipped with driver brakes. And the said Interstate Commerce Commission is hereby authorized, if found necessary after a full investigation, to extend the time for the full equipment of the rolling stock of any road affected by the provisions of this bill to such a date as it may in its judgment deem the exigencies of the circumstances and condition of the road in question may require, due regard to the rights and safety of employees always being had.

Mr. COFFIN. Now, all I ask is legislation that will help on and reinforce the roads in their selection of a coupler that is practical and is doing the work, and is being put on already very rapidly. The coupler that the master car-builders have adopted will be so perfected in its details that there will not be a single one of that type that will not couple and uncouple always under all circumstances.

Senator WOLCOTT. Some of the roads, in good faith, are, as rapidly as their business and finances will permit, changing to a standard coupler. Now, do you understand that they want the other roads coerced? These roads, as far as I am informed, are not here demanding legislation. How do you account for it, if the majority are going ahead and doing the best they can? You cited the Baltimore and Ohio and the Chicago, Burlington and Quincy—

Mr. COFFIN. In my private conversation with Mr. Haines, the presi-

dent of the American Railway Association, and also vice-president of the Plant system in the South—

Senator WOLCOTT. Is that a Wall-street concern?

Mr. COFFIN. I do not know.

Senator BARBOUR. I guess they are all in Wall street.

Mr. COFFIN. He said, "We do not want to be placed in a position of asking Congress to pass compulsory legislation." You know and we all know that they resist all kinds of legislation in regard to their own matters, but if you take up the testimony and talk of Col. Haines before the committee, it seems to me that you can read between the lines all along that he is almost asking you to help him by passing such a law.

Senator HARRIS. In view of the fact that the common carrier is required at common law to use the best safety appliances, failing to do which he is guilty of negligence, which would make him liable for all damages that occurred by reason of that failure, is it not probable that every carrier will have the best safety appliances as fast as he reasonably can?

Mr. COFFIN. It would seem so.

Senator HARRIS. Are they not doing so?

Mr. COFFIN. As a matter of fact, they are not doing so.

Senator HARRIS. Is it not a fact that they have, within the last year, adopted a vastly larger proportion than ever before; is it not a fact that they are now, up to the last date you have information, adopting them with the rapidity that characterized the proceedings of last year?

Mr. COFFIN. Let me answer that in this way: Our legislature, two years ago, passed a law that all roads running through Iowa must put on these couplers. Nebraska copied our law and passed it last year. New York has a law similar to that. These laws are having the effect of driving the roads to put on these appliances. This legislation will go on if Congress does not act. The States will act, and the danger is that we shall get a conflict and a multiplicity and have the same trouble we are having now. Congress is the only power that can act.

Senator JONES. In addition to what you say about the States, I understood you to say that an association representing 122,000 out of 170,000 miles of railroad have agreed to adopt this type of coupler, and are already putting them on?

Mr. COFFIN. That is what Mr. Haines stated before the committee.

Senator JONES. And you say that railroads began to use that coupler last year who had not used it before?

Mr. COFFIN. Yes, sir.

Senator JONES. And you also stated that other roads, you think, will do the same thing in the future?

Mr. COFFIN. Yes, sir.

Senator JONES. And continue the thing that way?

Mr. COFFIN. Yes, sir. It delays the thing. Too much stress can not be put on the necessity of having this transition period as short as possible. The secretary of the Trainmen's Association sent to the chairman the report for the last year, and I wish you would just look at that and see line after line where it says "Killed coupling cars," "Killed coupling cars," and you look further and see where the \$1,000 for total disability went. You will find that the majority are young, unmarried men.

The CHAIRMAN. Who pays this money?

Mr. COFFIN. The boys themselves.

Senator HIGGINS. It is an insurance fund?

Mr. COFFIN. Yes, sir; they do it among themselves.

The CHAIRMAN. It does not come out of the corporation?

Mr. COFFIN. No, sir.

Senator WOLCOTT. You know it is a fact that some of the railroads contribute their share?

Mr. COFFIN. Yes, sir. The Chicago, Burlington and Quincy and the Baltimore and Ohio have insurance companies.

Senator HIGGINS. The Pennsylvania and the Baltimore and Ohio Railroads require their employes to pay into the treasury a certain proportion of their salary?

Mr. COFFIN. Yes, sir.

Senator GORMAN. The company furnishes part of it.

Mr. COFFIN. Yes, sir; but the most of it comes from the boys themselves. There is no question if we can get legislation requiring all the roads to adopt a uniform coupler nine-tenths of this will be done away with.

Senator HIGGINS. Is it not true that the Baltimore and Ohio or the Pennsylvania in exacting of their employes membership in these associations also requires them to sign a contract that they will not sue the company for damages?

Mr. COFFIN. Yes, sir; that is the fact.

Senator WOLCOTT. Do you not know that that has been declared unconstitutional in most of the States?

Mr. COFFIN. Mr. Chairman, I would like to take up a few moments of your time in a discussion of the air-brake question.

The CHAIRMAN. Mr. Stahlman is here and is anxious to leave the city, and we will hear him now.

STATEMENT OF E. B. STAHLMAN.

The CHAIRMAN. Please state your relation to the railroads.

Mr. STAHLMAN. I am a commissioner of the Southern Railway and Steamship Association. Headquarters in Atlanta, Ga. My home is in Nashville.

Mr. Chairman and gentlemen of the committee, I shall be very brief in what I have to say. I have read the arguments presented on this question, as far as I have been able, since I was before the committee on Wednesday last, and there is one thing which has impressed itself upon my mind, and has doubtless found a lodgment in your minds, and that is that of all who have appeared before you desiring legislation scarcely any two agree.

The CHAIRMAN. As to the specific kind of legislation desired?

Mr. STAHLMAN. Yes, sir; as to the specific legislation.

The CHAIRMAN. All of them agree that something ought to be done?

Mr. STAHLMAN. Yes; all of them agree that something ought to be done. None of the gentlemen however who have appeared before you, who, from their own statements, have given the matter much thought and serious consideration, have agreed or do agree as to what ought to be done. About the only practical thing suggested by any man or body of men, as far as I can see, has been by the Association of Master Car-Builders. They agreed among themselves several years ago that something ought to be done, and they took steps to do it. They designated a certain type of coupler. The roads in the main agreed to adopt that style of coupler. That type of coupler is being put on the cars

of the different railroads in this country about as fast as anyone, under the circumstances, could expect it to be done.

In the first instance it may be assumed that when the Master Car-Builders' Association first recommended a particular type of coupler there was still some doubt in the minds of this body of mechanics as to the utility of that coupler, and hence for the first year or two the process of putting on the coupler was very slow. We find upon investigation that during the first year after the adoption of that coupler there were but a few put on. The test having been made that year to the satisfaction of a number of the railroads, more were put on the next year. The test having been more satisfactory to a larger number of roads, a larger number were put on the next year, so that now we have reached the point where we are pretty well satisfied that the type of coupler recommended will answer, and it is reasonable to assume, in view of what has been done, that much better results will follow and much more will be done hereafter.

The appointment of a commission to determine what ought to be done has been suggested. Suppose you appoint a commission? It will require a year or two at least for a commission under the plans proposed by some of these gentlemen to reach a conclusion as to what ought to be done. It will then require perhaps six months or a year for the Interstate Commerce Commission to determine whether or not that is the best thing to be done, and then if the Interstate Commission should conclude that it is not the best thing to be done it is to come back to Congress to settle in some other way, and all this time the work now going on, of putting on the master car-builders' type of coupler, which seem to answer every purpose, will be stopped.

The CHAIRMAN. I should think you would have them all on by this time?

Mr. STAHLMAN. The chances are, if let alone, that the entire work will be finished before that time.

Mr. Coffin, who seems to be an advocate of the master car-builders' type of coupler, insists that Congress shall fix a time in which to conclude this work. That suggestion upon its face does not seem unreasonable, yet in doing this Congress may go a long way toward assuming a responsibility for the Government which ought not to be assumed. Suppose Congress should say to the railroads that the work of putting on this type of coupler shall be completed within two, three, or five years, and the railroads, in accordance with the requirements, go forward, and after the work has been completed injury to life and limb continues, will not the railway companies be relieved of liability? Can Congress say to the railroads of the country you must do thus and so, and if done still make them liable for the injury inflicted by a compliance with the requirements? It seems to me we are treading on dangerous ground. At common law and under the several State statutes railway companies are required to adopt the best and safest appliances in conducting their business. Is it wise to relieve them, even by implication, of this responsibility?

I think I can plainly see why the makers or patentees of couplers of the master car-builders' type prefer to have Congress compel the railroads to adopt and complete the work of putting on that type of coupler within a few years. They know if Congress can be induced to take this step all other forms of couplers, even though an improvement on the master car-builders' type should be discovered, will be shut out.

Speaking for the section I represent, I think the reports of disaster to trainmen have been very greatly exaggerated. I speak now of the rail-

roads south of the Potomac and Ohio and east of the lower Mississippi rivers.

Senator GORMAN. What is the mileage?

Mr. STAHLMAN. About 25,000 miles, according to the report I have in my hand. The roads that I represent are embraced in groups four and five.

It is safe to assume that the railroads of the country do not want to kill people. They want to preserve life, and they are especially desirous of preserving the lives of those employed by them. If they can minimize the risk of operating their railroads they can reduce the expenses of operation. The brakeman who brakes upon the train, now receiving from \$2 to \$2.50 per day, would if engaged upon a farm receive less than \$1 per day. It is the risk largely which calls for the increased rate of wages. We have men working on the tracks for \$1 per day, and men in other branches of the service where there is practically no risk assumed who receive only \$1, who work just as hard and just as diligently as brakemen on the trains. They are not paid so well for the reason that the risk is not so great.

One would suppose from what has been said on the subject that the railroads were murdering people at a terrible rate. I have looked into this subject, and it is not near so great as you may have been led to believe. On the 25,000 miles of road in my section 39 were killed.

Senator GORMAN. In what time?

The CHAIRMAN. During what period?

Mr. STAHLMAN. During the entire year.

Senator CHANDLER. By coupling?

Mr. STAHLMAN. Yes, sir.

Senator GORMAN. What are you reading from?

Mr. STAHLMAN. From the last report of the Interstate Commerce Commission.

Senator HIGGINS. That is equivalent to the loss of life in a pretty sharp battle?

Mr. STAHLMAN. Yes, a skirmish. But if we will take the statistics of death to men who ride in vehicles and on horseback we will find it infinitely greater.

The duty, as the railroads of my section have seen it for the last eight or ten years, and the duty they are discharging faithfully, is to do all in their power to protect the lives of the traveling public.

Senator HIGGINS. Have the railroads you represent put on these appliances in as large a ratio as those of other sections?

Mr. STAHLMAN. I think not, as the reasons are that the earning capacity of the roads of my section is small as compared with other sections. The earnings are about \$4,300 per mile.

The CHAIRMAN. Per annum?

Mr. STAHLMAN. Yes, sir. The roads embraced in group No. 3 earn \$7,785 per mile.

Senator GORMAN. What section of the country is that?

Mr. STAHLMAN. The western section, east of the Lake region. The roads in group No. 1 earn \$10,441 per mile; and in group No. 2 \$15,829 per mile, so that our roads earn a little more than half of those in group 3, less than half of those in group 1, and less than one-third of those in group 2.

Senator HIGGINS. Is it your argument that the lack of earning capacity justifies you in killing and maiming people?

Mr. STAHLMAN. Not at all. My argument, Mr. Chairman, is that the first duty we owe is to the general public as common carriers. We must

put and keep our road in safe condition, and in order to do this we must take down our wooden bridges and put up iron bridges; we must take down our wooden trestles and put up iron trestles; we must arch our tunnels, we must put down better and heavier rails; we must put on better cars, we must put on better engines; we must improve the physical condition of our property, so as to carry, with reasonable safety, the people and property tendered us for transportation.

Of course, in addition to this we must do all we can to protect the lives and limbs of our employés. This I insist we have done and are doing as fast as conditions will allow. The coupler and air-brake question for freight trains is a comparatively new one. We have never been entirely satisfied that automatic couplers and air brakes would work, and until sufficient tests were made to establish this fact, we did not feel justified in incurring the expense. We knew tests were being made by roads in other sections and felt therefore that we ought to wait until they had developed the safest and best appliances.

It has been suggested in argument that because the railroads of the country are largely owned by persons residing at places other than where the roads are operated, the work of improvement is retarded. This is to argue that people who have money invested in railway property don't know how best to take care of their investments.

Does any one suppose that the man who is largely interested in railroad property will refuse to avail himself of the opportunity to get rid of the burden put upon him by the courts of the country for the loss of life and limb to employés as soon as he is shown the way? Not a bit of it. Show him how and he will do his utmost.

Has it ever occurred to the gentleman who made this suggestion why people in the sections where railroads are located have such small pecuniary interest in them? I will tell him, and for the purpose of illustration will take a single road in my section, which is perhaps the best one. The road in question has not averaged a cash dividend of $1\frac{1}{2}$ per cent per annum during the last fifteen years and has at various times had difficulty in paying the interest on its bonds. This road, moreover, is not bonded for what has been invested in its construction. The stock, therefore, represents a good part of the cost of constructing the line. I am speaking of the Louisville and Nashville. Who is there in our country, where money is loaning at 7, 8, 9, and even 10 per cent per annum, that wants a railroad investment with the possibility of a $1\frac{1}{2}$ per cent dividend per annum? It is for this reason that railroad property is largely owned in New York and elsewhere where capital is abundant and where they are in a position to let their investments remain in the hope of building up the country and of ultimately deriving something from the advance in the price of the stock and an advanced rate of dividend.

Mr. Chairman, the railroads of my section are not able to incur the expense of these improvements now. Some of the largest of them are in the throes of trouble to-day, and there is no telling where they may land within the next thirty days. We are not in a condition, I say, to have forced upon us an extraordinary expenditure at this time, but we believe as soon as the utility of the automatic coupler and air brake is established beyond question we shall be able to keep pace with the demands of the times. We have kept pace with the progress and improvement made up to this period and think we shall continue to do so, but we can not afford to spend our money on experiments. We must know that we are right before we can afford to go ahead.

The CHAIRMAN. Are you actually applying any automatic couplers?

Mr. STAHLMAN. Yes, sir. I say frankly not to the extent that has been done in other sections, for the reasons I have given.

Senator HARRIS. You are proceeding in that direction as fast as you can?

Mr. STAHLMAN. Yes, sir; and especially as rapidly as we feel justified, in view of the doubt which has surrounded the expediency of adopting these couplers up to this time.

Senator WOLCOTT. The men employed by your roads do not work under any contract that they will not sue for damages sustained. They can leave the road whenever they wish?

Mr. STAHLMAN. They are under no such contract, and can leave whenever they wish.

Senator HARRIS. Is the percentage of killed and wounded increasing or decreasing?

Mr. STAHLMAN. The statistics do not show whether there is an increase or a decrease. There ought to be a slight ratio of increase, because the number of men and the mileage are increasing.

Senator HARRIS. Taking into consideration the greater number employed and a larger number of miles, is the percentage increasing or decreasing in your opinion?

Mr. STAHLMAN. I think, if anything, it is decreasing. The men are growing more careful. They have more experience. They have been growing more and more so all the time.

We have, as a rule, a more reliable and better class of men in our service than you will find in the East or the larger cities of the West. The majority of the employes of Southern roads were born and raised in the sections traversed by the roads; many of them own their little homes, are educating their children, and are the heads or parts of happy households. They do not run from one city or section to another, or from one road to another. They are not agitators or disorganizers; they are, as a rule, quiet, good citizens and faithful workmen.

I do not understand that these people, our employes, have asked for legislation of this kind. They appreciate our conditions; are willing to let the matter rest and let us work out the problem, which they know will be done in due time.

The CHAIRMAN. If no legislation is enacted are you likely to have the means, and will you be able, to equip your cars with automatic couplers in any reasonable time?

Mr. STAHLMAN. Yes, sir. It costs very little more to put on the automatic coupler when the cars are built.

Senator HARRIS. When the Southern roads send a car to the shop for repairs, do they have the automatic coupler put on?

Mr. STAHLMAN. Not always. I can not state positively as to that. There has been much doubt up to this time regarding the utility of these couplers. I think there is very little doubt about it now. I think we have pretty well made up our minds that the coupler recommended by the master car-builders is the coupler that ought to be used, or one of that type. I assume, in view of the progress which has been made, with 20 per cent of the total number of cars in the United States already equipped with these couplers, that during the next year there will be added 25 per cent, because of the increased certainty of the success of the coupler; and the year following will show a still greater increase, so that within four years practically all the cars of the country will be equipped, leaving the entire responsibility with the transportation companies as to what particular type they will adopt, but giving them the opportunity to im-

prove upon the type, if during that period something better should develop.

Senator HIGGINS. Do you know whether or not on the new freight cars now being constructed they are putting the old link-and-pin coupler?

Mr. STAHLMAN. In my section in some cases, up to this time, yes, but I doubt if many cars will be constructed without the automatic coupler hereafter. Col. Haines, the president of the American Railway Association and vice-president of the Plant system, one of the leading railway systems of the South, has told you what he thinks of the question and what the Southern roads will probably do. He has given the subject a great deal of thought. What he said should therefore have weight with your committee.

The CHAIRMAN. When do you think the roads of the South will be ready to adopt the automatic coupler?

Mr. STAHLMAN. Two and a half years will, I am quite sure, bring us to a point where a conclusion will be reached.

The CHAIRMAN. Are you going to wait two and a half years to see whether anything better is invented?

Mr. STAHLMAN. I think not. We feel a very deep interest in this matter, not merely because we have the damage to pay if our men are injured, but because we feel an interest in the safety and well-being of our employes.

The CHAIRMAN. You can readily see if you wait to see whether something better is developed from year to year you are never going to do anything.

Mr. STAHLMAN. I grant that; but we have already pretty well concluded that the type recommended by the Master Car-Builders' Association can be made a success, and it is only because the Southern railroads were so poor and could not afford to experiment with anything surrounded with much doubt that there has been much delay. We know that tests and experiments were being made, and as soon as satisfied which is the best coupler to adopt we shall be ready to go ahead with the work.

Senator GORMAN. What would be the result financially if you were required to equip all your cars within five years?

Mr. STAHLMAN. It would cost, perhaps, \$10,000,000.

Senator CHANDLER. Why would it cost that sum?

Mr. STAHLMAN. I think I can safely say that the railroads of the South will average four cars to the mile. There are, say, 25,000 miles, making a total of 100,000 cars.

Senator JONES. You say there are a hundred thousand cars?

Mr. STAHLMAN. Yes, sir.

Senator JONES. At \$25 a car that would be \$2,500,000.

Mr. STAHLMAN. You are quite right, Senator, if confined to couplers alone, but with air brakes included the cost will not fall much short of \$100 per car, or \$10,000,000.

Senator HIGGINS. Would it do you any worse harm than drive you to foreclosure, and are you driven to that point of resisting foreclosure by killing people?

Mr. STAHLMAN. Not at all; we are simply awaiting developments.

Senator HIGGINS. They can sell you out. Some people will buy a railroad and run it without killing people.

Mr. STAHLMAN. I have not heard of such a road. I didn't suppose, at all events, that Congress cared to indulge in legislation calculated to wreck railroads; that it would rather aid in building up than pull-

ing down, and [laughingly] that Congress, if so much impressed with the necessities of the hour in respect to couplers and brakes, might see fit, instead of indulging in a wrecking process, to appropriate money to make these improvements for such roads as are not in a condition to do so themselves.

Congress has in the interest of the public weal, under the "public-welfare" clause of the constitution, done much in this direction. The history of legislation shows that Congress has appropriated from time to time to improve the navigation of the lower Ohio, Mississippi, Tennessee, Cumberland, Alabama, and other rivers of the South, sums aggregating over \$60,000,000. These appropriations (at no time antagonized by the railroad people of our section), have largely increased the competitive forces of river transportation and to that extent reduced the earning capacity of the Southern roads. If it was proper for Congress to do this in the interest of competition and trade, why not right to appropriate a small sum in the interest of life and limb?

Senator WOLCOTT. Do you understand that the Janney coupler is an insurance against accident?

Mr. STAHLMAN. I do not.

Senator GORMAN. Do you think it would be safe for Congress to specify through a commission or otherwise any particular coupler?

Mr. STAHLMAN. I do not. I think it would be a great mistake. We had to change the Westinghouse brake and the coupler used on passenger trains after they had been in use for some time and the probabilities are changes in the "master car-builders' type" for freight cars will also be necessary. For Congress to say or appoint a commission with power to say what type of coupler or brake are to be used, will be the means of shutting off all improvement in the future, no matter in what form that improvement shall present itself.

This inquiry, for which I beg to thank the Senator, brings up the additional question as to what railroads have done to minimize the risk of running freight trains, and thus promote the safety of their employees.

Some years ago it was no uncommon thing to see trains of freight cars of many different heights and size. The bumper and drawbars of one car would be two and a half feet from the track, while those of the car adjoining would be three to three and a half feet. The cars thus constructed could not be coupled at all except with the use of a crooked link. It was extremely difficult and dangerous to couple and uncouple these cars. It was for the purpose of uniformity in the construction of the cars that the Master Car Builders Association was founded, and as a result of the efforts of this association we now rarely see a car with bumpers not of uniform height. The association has gone so far that the wheels and axles are uniform; the body of the car is practically uniform. Everything has been done to bring about uniformity, and just as fast as conditions would permit the railroads have adopted the recommendations of the Master Car Builders Association. We of the South have, for the reason given you, been a little slower probably than the rest, but in the main have kept pace with the progress and development of the age, and shall not be far behind in respect to the pending matters when all reasonable doubt shall have been removed as to the utility and safety of the appliances in question. That we have about reached this point, I am quite persuaded.

I thank you, Mr. Chairman and gentlemen of the committee, for the patient and attentive hearing which has been accorded to me,

STATEMENT OF EDWARD A. MOSELEY.

Mr. MOSELEY. I desire to read a communication from Mr. Spencer Smith, one of the railroad commissioners of Iowa, who has spent much time in the study of this entire subject. The communication is addressed to the honorable chairman and members of this committee. As secretary of the committee on safety appliances of the national convention of railroad commissioners, I desire to read this communication, Mr. Smith being a member of that committee. It is as follows:

IN THE MATTER OF SAFETY APPLIANCES FOR FREIGHT CARS.

To Senator Cullom, chairman, and the members of the Senate Committee on Interstate Commerce:

GENTLEMEN: It may be proper at the threshold of this conference to ask your attention to a brief statement of the preliminary work already done by the committee of which I have the honor to be a member, together with a review of some of the conditions that led up to the formation thereof.

At the national convention of the railroad commissioners held at the offices of the Interstate Commerce Commission, Washington, D. C., on May 28 and 29, 1890, the following resolutions were adopted:

Resolved, That the respective States should require either directly by law, or indirectly through the instrumentality of their railroad commissions, each railroad corporation subject to their jurisdiction to place driving wheel brakes and apparatus for train brakes on every locomotive constructed or purchased by it, and train brakes upon every freight car hereafter constructed or purchased by it, and upon every freight car owned by it, the coupler or drawbar of which is repaired by it, an automatic coupler of the master car builders' type at each end of the car.

Resolved, That Congress either directly by law or indirectly through the instrumentality of the Interstate Commerce Commission should take similar action.

Following up the position taken at this conference, the national convention held in Washington on March 3 and 4, of this year, after much discussion, appointed a special committee to prepare resolutions upon this question. The report of the committee was as follows and was adopted unanimously.

Resolved, First. That a committee of five be appointed by the chair to urge upon Congress as soon as possible after the opening of the next regular session, the imperative need for action by that body calculated to hasten and insure the equipment of freight cars throughout the country with uniform automatic couplers and train brakes and the equipment of locomotives with driving wheel brakes, and present and urge the passage of a bill therefor.

Second. That the committee, before presenting the bill to the appropriate Congressional committee, be requested, after public notice, to give a hearing to accredited representatives of such organizations of railroad officials or employees as may desire to be heard.

Third. That the secretary of this convention act as secretary of this committee.

Judge Cooley named the committee as follows: Hon. George G. Crocker, Massachusetts; Hon. James C. Hill, Virginia; Hon. Spencer Smith, Iowa; Hon. William E. Rogers, New York; Hon. John H. King, South Dakota. Hon. Edward A. Moseley became secretary by the terms of the resolution.

It will be seen that in the last adopted resolution the type of couplers was not specified, as was done in the resolution adopted the year previous, simply declaring for "uniform automatic couplers, train brakes and drive wheel brakes."

On February 28 the committee held its first meeting at Washington

City, perfected its organization by the selection of Hon. George G. Crocker, of Massachusetts, as chairman, and prepared a list of questions to be sent to all of the railroads of the United States, viz:

- (1) What is the total number of freight cars owned, leased, or otherwise controlled by your company?
- (2) How many are equipped with automatic couplers?
- (3) State the kind of couplers used and the number of cars equipped with each kind.
- (4) With what kind of coupler do you cause your freight cars to be equipped?
- (5) How many cars have you equipped with train brakes? State the name of the brake used.
- (6) How many locomotives does your road own, lease, or control? State the number equipped with driving-wheel brakes.
- (7) Please state in what way in your opinion the equipment of freight cars, with uniform automatic couplers, can best be hastened.

On November 10 and 11 the committee was in session in the Chamber of Commerce, New York city, and heard representatives from the American Railway Association, Brotherhood of Locomotive Engineers, Switchmen's Mutual Aid Association, Yardmasters' Association, Railway Employees' Association, Master Mechanics' Association, Order of Railway Conductors, Brotherhood of Railway Trainmen, Members of Safety Appliances, Committee of American Railway Association, and others.

Of the roads responding to the questions sent out, 69, representing 13,014 miles of road, favored national legislation; 88, representing 46,791 miles of road, favored voluntary action on the part of the companies; 2, representing 139 miles, favored state legislation; 17, representing 11,916 miles of road, favored the Master Car-Builders' type of coupler; 10, representing 4,830 miles of road, favored other couplers; 15, representing 9,418 miles of road, believed the matter still in the experimental stage, and 145, representing 38,986 miles of road, expressed no opinion as to the best means of bringing about uniformity. The Atehison, Topeka and Santa Fé and one other road favored the Safford automatic link-and-pin coupler. The fact was developed that there are now in use about 1,200,000 freight cars, of which 200,000 are equipped with automatic couplers of various kinds of the Master Car-Builders' type, and about 50,000 of other types. Of the 27,000 locomotive engines 17,000 are equipped with driving-wheel brakes. About 100,000 freight cars are equipped with Westinghouse train brakes, and some 15,000 with other types. Advanced figures furnished by Secretary Moseley, of the Interstate Commerce Commission, showing the killed and injured for the last fiscal year, were read as follows: For the year 1889, trainmen killed, 1,972; injured, 20,028; total, 22,000. For the year 1890, trainmen killed, 2,451; injured, 22,390; total, 24,841. An increase of killed and injured of 2,841, due to all causes.

Of these accidents, those due to the coupling and uncoupling of cars in 1889, killed, 300; injured, 6,767; total, 7,067. For the year 1890, killed, 369; injured, 7,841; total, 8,210; an increase of 1,143.

Falling from cars, year 1889, killed, 493; injured, 2,011; total, 2,504. For the year 1890, killed, 547; injured, 2,348; total, 2,905; an increase of 894.

The committee heard representatives of all the associations. Col. H. S. Haynes, president of the American Railway Association, speaking for that body, said that it has a standing committee on safety appliances that had gone through the same course of investigation as the committee now holding this session. They hoped to lessen the loss of life and limb. They represented 125,000 miles of road and had adopted the vertical hook type of couplers as their standard.

The railroad companies themselves had developed this type. His association had helped it along, but it was only within the last few years that something had been found to meet the requirements. The demand for this coupler was now almost universal. While it might not be the best thing, it was the best up to this time. Legislation calling for one kind of coupler would block progress. A million more cars to be equipped, at \$25 each, meant \$25,000,000; all the coupler-makers of the country could not turn out over 200,000 couplers per year, and this equipment meant five years to replace the link and pin, to say nothing of repairs and new cars. The railroad companies would do it as fast as possible. Engine brakes are now put on practically all locomotives ordered. The freight-train brake was not yet in the condition it ought to be for long trains. The air brakes cost twice as much per car as automatic couplers. It meant an outlay of \$50,000,000 to fully equip the rolling stock of the railways. That it is not claimed that the Master Car-Builders' type is the best form that can be devised, but that it is the best that has been made up to date, and the association does not feel that it can go further. That the railroads make a wider application of safety appliances in this country than they do in Europe, and in this particular case have devoted a great deal of time and money to the production of the type of coupler that has been recommended. On the Plant system there are now but two cars fitted with Master Car-Builders' couplers, but there are 1,000 cars under construction, each of which will be equipped with the Master Car-Builders' type, and I am told that this is universal on new work, showing how rapidly this work is going forward. It is doubtful whether the capacity of all the coupler-manufacturers in the country exceeds 150,000 cars a year. The truth is, said Col. Haynes, the companies are advancing as fast as possible where their mechanical and financial ability is concerned.

Mr. M. N. Forney, speaking for the committee of the Master Mechanics' Association, stated that the association which he represented was devoted to the mechanical development of railway rolling stock, and that for ten years this matter of a suitable coupler has been before the association, but the first actual steps were taken in 1884, when a committee reported to the association at Saratoga favoring the adoption of the vertical plane hook coupler, but it was not until 1887 that the contour lines were adopted by a two-thirds vote and a letter ballot. The owners of the patents on these contour lines surrendered their rights, so that while there are numerous patents on the locking devices and details, the contour lines are free for all.

No one is prepared to say that the type adopted fulfills all the requirements. There is only one class of men who are perfectly satisfied, and they are the inventors. Hence any legislation enforcing the adoption would result in the use of something not complete and not altogether desirable.

Legislation should take the form of recommendations, like the enactments of the British Board of Trade; it should provide for publicity, for recommendations, for acting as a sort of recording angel on the acts of railroad managers, and depend upon practical developments for the rest.

"It is safer for the present," said Mr. Forney, "to leave it in the hands of the railroads."

Mr. T. N. Ely, of the Pennsylvania Railroad, said that his company was putting these couplers and air brakes on as fast as possible, and no law could hurry it any.

Vice-President E. B. Thomas, of the Erie Railroad, said that his com-

pany was going as fast as possible in both M. C. B. couplers and air brakes, including cars repaired. In time they would refuse to have cars equipped with link-and-pin couplers.

Lucius Tuttle, New York, New Hampshire and Hudson, said that his road was advancing without legislation. All cars repaired had M. C. B. couplers put on all their new cars. All their engines were having air brakes put on. The coupler subject was taking care of itself. All the cars in the country would be equipped in about five years.

Maj. E. T. D. Myers, president Richmond, Fredericksburg and Potomac Railroad, spoke for the committee on safety appliances of the American Railway Association. They were doing all they could with both couplers and power brakes. He thought legislation the wrong way to do it. Public opinion was more powerful. That all the Virginia roads were putting them on; also the roads south of there, and without legislation. "No improvements in transportation," said Maj. Myers, "had come from anything but public opinion; that the Janney coupler was born in Virginia, and the roads there put it in use before there was compulsory legislation anywhere."

C. W. Bradley, general superintendent West Shore Railroad, said that all their fast freight cars had air brakes and M. C. B. couplers. All his connections were putting them on. He would like to reject all cars without M. C. B. couplers.

Mr. Frank Sweeney, of the Trainmen's Mutual Aid Association, said that the present varieties of draft irons were a great danger to switchmen. They could not educate themselves on the various appliances, there were so many. Something should be done to prevent the injury of switchmen. They were in favor of uniformity of height of cars. With the present mixture of couplings, cars had often to be stopped to pull the pins. With the M. C. B. type and a link it might fly either way in concussion. They wanted a uniform type of drawbar.

Regarding legislation there should be something done to enforce the standard height of cars, and some steps should be taken, either by legislation or otherwise, bearing on this subject.

Mr. D. B. Sweeney, of the Trainmen's Aid Association, favored the link-and-pin type. The vertical hook was too dangerous. They had to go between the cars to open the knuckle. The coupling apparatus was always broken. With the link and pin they knew when a car was cut, but when they threw up the lever they could never tell whether it would open or not. There was nothing better than a link and pin. Besides, said Mr. Sweeney, it is still necessary to go between the cars to open the knuckle, even when in good condition, and they will not couple on curves.

Mr. John H. Hall, of the United Order of Railway Employés and editor of the Switchmen's Journal, described vividly the duties of yard switchmen and the difficulties they labored under. Something should be done for them. The railroads were, he thought, doing all they could for them. He had many years' experience in yard work and preferred the link and pin. The conditions under which these men worked were getting worse, and legislation was necessary unless the railroads accomplished more. A greater number of men were hurt every year. If nothing but vertical planes were used they would still have to go between the cars, they were out of order so much. He believed the link and pin could be as automatic as the vertical plane. Yet if all cars had vertical plane couplers the condition would be a thousand times better than they were to-day. The switchmen favored uniformity.

Mr. A. D. Shaw, of the Yardmasters' Association, favored automatic

couplers and uniform length of drawbars and cars. There were too many good drawbars and too much mixture of good and bad.

Mr. Heberling, of the Switchmen's Aid Association, said that they favored a uniform link-and-pin type of a uniform drawbar, anyway. If two cars of the M. C. B. type were set together without opening the knuckles, they were sure to break. Give them a uniform drawbar of some kind and it would save the lives of many men.

Mr. Roach, of the same association, followed, speaking of the danger of coupling the link and pin with the M. C. B. type. All of the new type of couplers were a detriment and an annoyance to the switchmen.

J. T. Chamberlin, master car-builder of the Boston and Maine, said that their employes, who had spoken, knew better what was wanted than the officers. The men of his road all favored the link-and-pin type of coupler. The vertical-plane drawbars had broken badly on his road, and now they had none.

William McWood, of the Grand Trunk, said that personally he was opposed to the vertical-plane type. The switchmen's views coincided with his. He did not think the M. C. B. type gave good satisfaction. The pin still remained, and if it became bent the knuckle would not work. Neither were the knuckles interchangeable, which was a serious objection. More satisfaction and better results could be had from a good automatic link-and-pin coupler.

G. W. Rhodes, master car-builder of the Chicago, Burlington and Quincy Railroad Company, was of the opinion that they should not make haste too quickly, and while we may not feel warranted in giving an unqualified indorsement to the type that has been adopted, still it does seem to be the best that has yet been devised. The Chicago, Burlington and Quincy Railroad Company has paid the closest attention to the coupler question, just as it did to the brake matter in 1887. It has paid out money freely in the development of safety appliances, and feels that there is no need of legislation to coerce it into the adoption of the coupler or of automatic brakes. At present there are in course of construction for the road 2,500 cars, of 60,000 pounds capacity, which will be equipped with M. C. B. couplers and air brakes.

Hon. L. S. Coffin closed the hearing, appealing in the name of the associations represented by him for positive legislation, compelling the adoption of the M. C. B. coupler and train brakes.

The committee had a conference after the adjournment of the public hearing at which there was a free and full exchange of opinions and an agreement reached that each member of the committee should formulate a bill covering the needed legislation and submit the same to the others for their approval, the bill receiving the majority approval to become the committee bill. Shortly after the November meeting, two members of the committee ceased to be railroad commissioners, and so far as I am informed took no further action in the matter. A bill now in the hands of the secretary of the committee, Hon. Edward A. Moseley, has the approval of Mr. Rogers, of New York, Mr. Hill, of Virginia, and the subscriber, a majority of the committee and all of the present active members thereof.

That you will report this proposed bill back to the Senate as the bill of your committee is respectfully urged.

For many years railroad employes have suffered accidents resulting in personal injury and death, largely for want of uniformity in the appliances used in handling cars. With the beginning of railway car service, while the danger of the link-and-pin coupler and the hand brakes existed, it is known to have been in a proportionate less degree,

for the reason that both brakes and couplers were uniform or nearly so, and the trainman or yardman handling them always found the one that he handled to-day the same as that handled on yesterday. Inventive genius, however, ever active, has produced a multiplicity of couplers, many of them of great merit and in use on the different lines, and this greatly complicated matters and increased rather than lessened the danger.

State legislation providing for safety appliances in several States followed these inventions, and State commissioners in one State approved one type, in another a different type, and with each step intended to be in advance, the danger grew alarmingly. What is the remedy? Uniformity; and with so large a per cent of the cars passing across State lines this uniformity will come most rapidly when provided for by Federal legislation. That it will cost money to bring about this reform is admitted, but in what direction can the Government make expenditures that will bring results more to be desired? The Government has a life-saving service doing duty on the coast; a grand and humane service it is. About \$1,000,000 was expended on it last year and 350 lives saved, while 2,451 were killed last year in the railway service and 22,000 injured; and may not the General Government properly do something to decrease materially this terrible loss?

Many of the leading lines of the country are rapidly supplying their equipment with safety appliances, but not all in the line of uniformity. Then there are other lines that are making but little, if any, progress in this direction. The remedy is Federal legislation to compel the dilatory roads to properly equip their cars or to use the alternative of paying the expense attending the transfer of tonnage from their cars to the equipped cars of other companies.

That the present trend of the strong lines is in the direction of uniformity and safety, may be illustrated by the fact of the recent adoption of the M. C. B. type of coupler by the Boston and Albany Railway Company after much strenuous objection to it, because the action of the New York Central and other important lines virtually compelled such adoption. It is the obstinate manager and the manager of impecunious lines who stand in the way of progress in the direction of uniformity and safety, and to reach such cases is the strong arm of the law invoked.

It may be contended that the Interstate Commission now has authority to regulate these matters under its general powers of "inquiry into the management of the business," etc., but it has not so far in its work exercised that authority, nor is it likely to do so in the multiplicity of duties imposed upon it.

What is required is a law that will keep up the progress now being made, allowing a reasonable time in which the reforms are to be brought about, with sufficient elasticity to permit extensions of time in worthy and deserving cases, as is provided for in the English law of 1889, and followed in the bill formulated by the safety appliance committee which is now before you for consideration.

We are passing through the transition period with all its attending terrors followed by increased fatalities and injuries, and any legislation that fails to provide for uniformity is a step backwards. Uniformity in the drawbar, in the height of the car and in all of its parts and attachments is of pressing importance and can not be given too much consideration.

SPENCER SMITH,
Commissioner.

I will also read the bill Mr. Smith has prepared:

AN ACT to promote the safety of railway employes and travelers and requiring common carriers engaged in interstate commerce to equip their cars with automatic couplers of a standard uniform type and continuous train brakes and their locomotives with power brakes, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled:

SECTION 1. That on and after the 1st day of January, 1893, it shall be unlawful for any common carrier subject to the provisions of the act entitled "An act to regulate commerce," approved February 4, 1887, to put into use on its line any new locomotive engine, to be used in moving interstate commerce, as defined in section 1 of said act, that is not equipped with a proper power brake.

SEC. 2. That from and after the 1st day of January, 1895, it shall be unlawful for any common carrier subject to said "act to regulate commerce," to use on its line any locomotive engine in moving interstate commerce, as defined in section 1 of said act, that is not equipped with a proper power brake.

SEC. 3. That on and after the 1st day of January, 1893, it shall be unlawful for any common carrier subject to the said act to regulate commerce to put into use on its line for the purpose of moving interstate commerce, as defined in section 1 of said act, any new car or any old car that has been to the shops for general repairs to one or both of its drawbars that is not equipped with automatic couplers of a standard type, so constructed that such car can be coupled to and uncoupled from the next car without the necessity of a person going between said cars.

SEC. 4. That on and after the 1st day of January, 1897, it shall be unlawful for any common carrier subject to the said "act to regulate commerce," to haul or permit to be hauled or use on its line any car used in moving interstate commerce as defined in section 1 of said act, unless such car is equipped with automatic couplers of a standard type, so constructed that such car can be coupled to and uncoupled from the next car without the necessity of a person going between said cars.

SEC. 5. That from and after the 1st day of January, 1893, it shall be unlawful for any common carrier subject to the said "act to regulate commerce," to put into use, to haul or permit to be hauled on its line for the purpose of moving interstate commerce, as defined in section 1 of said act, any new car or any old car that has been to the shops for general repairs to its brakes that is not properly equipped with continuous train brakes sufficient to control the train that can be operated from the locomotive.

SEC. 6. That from and after the 1st day of January, 1893, it shall be unlawful for any common carrier subject to the said "act to regulate commerce" to put into use, to haul or permit to be hauled on its line any car used in moving interstate commerce, as defined in section 1 of said act, that is not properly equipped with continuous train brakes sufficient to control the train that can be operated from the locomotive.

SEC. 7. That any such common carrier violating any of the provisions of this act shall be liable to a penalty of \$100 for each and every such violation, to be recovered in a suit or suits to be brought in the district court of the United States having jurisdiction in the locality where such violation shall have been committed, by the United States district attorney of such district, and it shall be the duty of such district attorney to bring such suits upon duly verified information being lodged with him of such violation having occurred.

SEC. 8. That on the 1st day of July, A. D. 1892, each common carrier of the United States subject to said "act to regulate commerce" shall file with the Interstate Commerce Commission a letter ballot setting out the type of standard automatic coupler that it prefers, said Commission to have full authority to provide for such ballot and to decide upon the validity of all votes cast. The vote shall be based upon the number of freight cars owned by each line, and the type of coupler receiving 60 per cent or more of the entire votes entitled to be cast shall be the "standard type" of automatic coupler provided for in this act.

If the roads shall fail to establish a standard type of coupler, as herein provided, then the standard type of automatic coupler shall be that known as the Master Car-Builders' type; that is to say, said coupler shall be of such size and dimensions, and shall conform to such contour lines as are set forth in plates 6 and 7 of the printed official report of the proceedings of the 25th Annual Convention of the Master Car-Builders' Association, held at Cape May, N. J., June 9, 10, and 11, 1891, as modified by a circular from the Executive Committee of

said Master Car-Builders' Association, dated Chicago, September 1, 1891, signed by J. W. Cloud, secretary.

SEC. 9. That the Interstate Commerce Commission shall have power, upon a showing which they deem reasonable, to extend the time within which any particular carrier shall be required to comply with the provisions of this act, provided that no extensions shall be made beyond 1900. After the year 1900 any common carrier may refuse to accept or receive any car used in interstate commerce that is not properly equipped as required by this act, and the carrier loading or starting such car shall be liable for the damages, if any result therefrom.

SEC. 10. Any employé of any common carrier engaged in interstate commerce, as defined in the act of February 4, 1887, who may be injured by any locomotive, car, or train in use contrary to the provisions of this act shall not be deemed guilty of contributory negligence, although continuing in the employ of such carrier after habitual unlawful use of such locomotive, car, or train had been brought to his knowledge.

I do not desire to occupy your time at any length, but while I appreciate to the fullest extent the philanthropic work of Mr. Coffin, who has spent, as I know, a great deal of time in the study of this subject, I feel it my duty to state to you one or two things. An inquiry was sent by me to every railroad in the United States, addressed to its president, asking him, on behalf of the committee on safety appliances, what he favored as to couplers.

Mr. KING. That is our committee?

Mr. MOSLEY. Yes, sir. Seventeen roads, representing 11,915 miles, expressed themselves in favor of the Master Car-Builders' type, the type which Mr. Coffin urges upon this committee.

I do not know that I wish to say anything else except that you have had a number of bills and a great many different ideas presented to you, but with it all there has been no criticism of certain provisions of almost every one of the bills and that is as to the uniform height of the drawbars of cars, the use of train brakes, and the use of driving-wheel brakes upon engines. Those are things to which there has been no antagonism shown and in regard to which the people who are leading in this move ask Congress to legislate. No one representing the railroad has opposed any of those propositions. It is simply a question of uniformity, and as Senator Harris has so thoroughly stated to the gentleman here, there are thousands of men to be injured and hundreds, perhaps thousands, to be killed in the transition stage from anything, from the old link and pin to any other coupler, and the only desire that I can have is that that stage be lessened and the length of time be shortened so that as few men as possible may have to sacrifice themselves for the benefit of those who may come after them.

STATEMENT OF ROSWELL MILLER.

Roswell Miller, president of the Chicago, Milwaukee and St. Paul Railroad, submitted the following statement:

In re the proposed bill for an act entitled "An act to promote the safety of employés and travelers upon railroads by compelling common carriers engaged in interstate commerce to equip their cars with automatic couplers and continuous brakes and their locomotives with driving-wheel brakes."

SECTION 1. There is no objection to this section.

SEC. 2. The date should be January 1, 1897, for five years' time will be needed in making the necessary changes.

SEC. 3. The date should be changed to January 1, 1897. The time

fixed by this section is especially objectionable, so far as it relates to cars upon which general repairs must be made. It is not always possible for railroad companies to get sufficient equipment, and again it frequently happens that they have in their possession such a large number of cars upon which general repairs should be made that a great deal of time is necessary in which to make repairs. Some of the smaller roads might be able to make changes within the time named in this section, but it is morally certain that many of the larger roads could not do it. A date should be named which will enable all of the railroads to make changes without loss or damage, and without interfering with their regular business.

SEC. 4. There is no objection to this section.

SEC. 5. This section is objected to, for the reason that it is possible to haul with entire safety in freight trains a certain percentage of cars which have no air brakes. Heretofore in bills relating to this subject it has usually been provided that after a fixed date no trains should be run without sufficient cars equipped with air brakes to control the movements of the train. Such a provision should be in this section.

SEC. 6. As a fundamental proposition, whatever coupler a railroad company may think to be the best, it has the right to buy and use; another company may, in good faith, prefer another coupler, buy it and have a right to use it. The circumstances of railroad traffic make it necessary for the roads to use couplers which will work together satisfactorily, and which will be as safe as possible. The railroads are already suffering from what may be called a combination of the Janney-Hein coupler, by means of which the companies are charged and compelled to pay \$10 per car more than the actual cost of the coupler. If an obligation be placed upon the companies to adopt automatic couplers within a certain time, the conditions of railroad traffic will necessarily compel them to provide an interchangeable coupler.

SECS. 7, 8, and 9. Nothing need be said of these sections at this time.

SEC. 10. This section should provide that, when common carriers have adopted the devices that they are compelled to adopt by law, they shall not be liable for any damage that may occur to persons or property in consequence of the use of such devices, unless such damage is caused by failure of the common carrier to use due diligence in keeping the same in order. It is believed by many good railroad men that there will be more accidents and more people hurt by the use of the automatic coupler than by the use of the link pin coupler—at least in the present imperfect form of the automatic coupler. If railway companies are obliged by law to use such devices they should be relieved from the consequences of such use, unless they negligently fail to keep the same in repair. If Congress determines that a device of a certain kind should be used, and the railway companies thereupon make use of such device, it is nothing more than, just they should be absolved from all liability incident to such use, except where they are guilty of negligence in keeping such device in good order.

Generally. No legislation is necessary with relation to couplers or air brakes. Railway companies are progressive and are going ahead just as fast as they can. The importance of getting the best air brakes and couplers and of reducing accidents to a minimum is realized by all capable railway men, and they are constantly endeavoring to find the best means for the accomplishment of the desired end. It is believed that they will reach this result quicker without legislation than with it. The selection of a device should not be put into the hands of the switch-

men or the locomotive firemen, for they are not capable of judging, as they are without actual experience in the use of the various couplers, and because they have not sufficient mechanical skill to enable them to decide correctly. Every railway company has in its employ skilled mechanics and well-informed and responsible officers, and it is submitted that they are the proper persons, and the only proper persons, to determine what form of coupler or brake is best. Such men are sure to take into account not only durability and safety, but the question of cost, and the latter is a thing which would not be considered by a committee of switchmen or firemen, for they would not know how to consider it, even if they wished to.

Respectfully submitted.

CHICAGO, MILWAUKEE AND ST. PAUL R. R.
ROSWELL MILLER, *President*.

STATEMENT OF BRITTON & GRAY.

Britton & Gray, on behalf of the Atchison, Topeka and Santa Fé Railroad Company, submitted the following statement:

The necessity and desirability of such uniform coupling device as will give certain, safe, and continuous interlocking connection between the freight cars of all railroads is recognized by all the carriers, and constant effort is being put forth to accomplish that result. Among the many thousands of patented inventions on this subject, however, none have as yet been found combining the desired elements of safety, certainty, and durability.

In this connection, President Manvel, of this company, remarks:

Two or three years ago the Master Car-Builders gave it as their judgment, in their meeting, that what is known as a "vertical plane coupler" ought to be adopted; and, while there are different patents covering this invention, it was agreed that certain contour lines on the different devices should be used so that they would be interchangeable and couple with each other, even although of different make and of different patents. Our company with no usual enterprise purchased between 4,000 and 5,000 of these couplers at an expense of about \$60,000, and find now, after practical use, that it has probably got to throw them all away. It is found that after some use, and when the surfaces become worn somewhat, they will not stay coupled together, and to-day it is impossible to get men operating on the mountains to take a train over until the entire equipment is coupled up with the ordinary link and pin. It is found that one of these devices that has been in use, say from two to three years, will not couple properly with another device that is perfectly new. It is found, also, that the vertical plane device which has been used more or less in connection with the other couplers is not built so that it will bear the shocks that come to it, and it is quite sure that, if the opinions can be secured of all men on our line who have to use them, 95 per cent of them would say that they prefer the old link and pin coupler. I believe if any such legislation is attempted to be put upon the railway companies that it will only result in large loss without any compensating benefits.

With respect to the Master Car-Builders' type coupler, President Manvel further states:

I give it as my deliberate judgment, after spending my entire business life of over thirty years in the various departments of railroading, that this law is disposed to work with great injustice to the roads and will fail to bring about the object desired, namely, safety to life and limb. It is not what the railways generally want; it is not what the men themselves would select who have to use them, and people seem to be proceeding on the basis that a change to the Master Car-Builders' type will do away with the loss of life and injury to persons. That is, I understand, the fundamental reason for urging this bill.

You are advised that I have myself been urged to accept stock in one of these companies, that was to cost me nothing and was to secure my cooperation in the attempts that are now being made.

Please understand that no one is more keenly alive than myself to the desirability of adopting the best appliances to prevent injury to our own employés, but I look upon the present attempt as one not beneficial to the railroads and one not calculated to protect and save our men. For these reasons, this company having spent between \$50,000 and \$60,000 in a test of this kind of coupler, and having abandoned their use, I think I have good reason to object to the adoption on our line of a device that experience and observation lead me to believe will not bring about the result that all railroads are so anxious to accomplish.

As confirming President Manvel's views derived from long experience, the action of the switchmen's convention, held at Buffalo, N. Y., on September 24, 1895, is thus stated in the Chicago Evening Post of the same date.

PATENT COUPLERS CONDEMNED.

Buffalo, September 24.—The switchmen's convention last night selected Philadelphia as the next place of meeting. On the question of car-couplers the vertical plane or car-builders' type was almost unanimously condemned, the members citing the crippled delegates as a result of the many patent couplers used, and a motion was made and carried endorsing the link and pin bar with a recess on the side that affords protection to the operator.

Adoption of any system of coupler device involves an expenditure on the part of these carriers amounting to many millions of dollars. To thus provide the equipment of the Atchison, Topeka and Santa Fé system involves an expenditure of upwards of \$2,000,000.

Under these conditions of uncertainty as to the best uniform system which can be obtained and the enormous expenditure involved, it is imperative that there should be the most intelligent results before legislation is adopted compelling the use of any device or the expenditure of this vast sum. To that end a commission should be appointed of practical men, possessing in the highest degree the elements of experience and intelligence, to give immediate and thorough test of these couplers and to determine a uniform device which can be used with certainty, safety, and durability in transporting the vast commerce of the country. Such commission should be required to report within a year their conclusion and reasons therefor, to be then followed by mandatory legislation requiring the carriers to change and adapt their equipment thereto within such reasonable time as the circumstances then developed may justly permit. Whilst the dictates of humanity and common business prudence furnish the strongest incentive to each carrier for the adoption of these safety appliances of highest approved merit, yet the uncertainty surrounding the subject as at present developed and the enormous outlay required in reaching the end desired forbid legislation which is not the result of most thorough and careful test and does not rest upon the judgment of the highest practical and expert authority.

Such commission would be representative of the carriers and the best elements of intelligence and practical knowledge among the employés having such vital interest in the results. When that is secured legislation can be based thereon with certainty and the carriers can move forward in accomplishing the final and great end desired, with the assurance that the vast outlay required will bring the result desired, and the employés whose occupation subjects them to the risks of injury and death can feel that the uniform device thus adopted combines the highest elements of certainty and safety which the inventive mind has then accomplished. The coöperation of all carriers in the work of such commission would be strong and immediate, and it is beyond question that the facilities afforded thereto would be complete and exhaustive.

Such an independent commission should not be influenced by the efforts made to secure the adoption of any particular device because of the immense profit which would follow to its promoters, but have in view solely the great object to be attained. And the carriers when thus given opportunity to assist and join in these tests and to aid in fullest degree the work of the commission, will feel assured at the conclusion thereof that the legislation thus recommended and thereafter adopted sprung from untainted sources, and prompted by the sole desire to reach the great end of protection to life and limb of its employes. The conclusion of the commission should receive affirmative adoption into law by Congress direct rather than by delegated authority.

In the hearings heretofore had before the committee, a commission of this character, and aiming at this result, is strongly recommended in the statement of Mr. Frank P. Sargent, grand master of the Brotherhood of Locomotive Firemen (pp. 58-61), and of Mr. John Downey, a practical switchman of more than twenty years' experience (pp. 62-64).

The practical views of these gentlemen are worthy of highest consideration, and examination of their statements will show the strong grounds of practical reasoning on which they are based. -

Respectfully submitted.

BRITTON & GRAY,

Attorneys Atchison, Topeka and Santa Fé Railroad Company.

MARCH 3, 1892.

At 12 o'clock m. the committee adjourned.

ADDITIONAL STATEMENT OF L. S. COFFIN.

MR. COFFIN. Mr. Chairman and members of the committee, you will recollect that at the hearing before you on March 2 I gave way to Mr. Stahlman before I had concluded what I wished to say. At the suggestion of your chairman, Senator Cullom, I submit the balance of my remarks in writing.

Allow me to say that my earnest plea for that form of a law which recognizes the very important work already done by the railroads through their ablest corps of mechanics in developing a uniform system for the safe coupling of cars arises from my intimate knowledge of the wonderful progress made in this direction, and of the substantial and practical unanimity at which the large majority of the railroad carrier corporations have at this time arrived. The great demand, you must conclude from all that has been said before you on this subject, is for uniformity.

Practically we have that now by the voluntary action of a large majority of the railroads. Hence I am earnest in my desire to show you that all that is now needed is some simple law requiring a compliance with the will and practice of the majority.

This is a nation where the majority rule is recognized. Legislation now for the 275,000 men in this nation engaged in the operating department of railroad services need not be groping in the dark.

If the committee feel any hesitancy about the matter and would like fuller information I will leave with them some copies of the reports of the transactions of the National Master Car Builders annual conventions

and mark for convenient reference the parts more directly to the point under discussion. On page 28, of report for 1885, commences a discussion of the coupler question.

On bottom of page 33, see motion made by Mr. Wall, superintendent of shops of the Pittsburg, Cincinnati and St. Louis Railroad, controlling their 10,822 cars.

Page 39 shows resolutions adopted.

Page 128 shows committee appointed to test and collect information of couplers.

In report of 1886, on page 74, commences report of the above committee on the tests made at Buffalo, N. Y., which you will find very interesting, and commencing on page 81 and on will be found cuts of the couplers tested, which please see.

I would now call your special attention to the report of 1887, in which is record of the final report of the committee on safety couplers and the action of the convention thereon, and especially to the remarks of its chairman, Mr. Wall, on pages 194 and 195, now representing 11,474 cars, at that date, 1887. On pages 247, 248, 249, 250, 251, and 252 is the tabulated statement of the management of the roads giving the latter ballot on the action of the Master Car Builders establishing a standard coupler, showing over two-thirds for it, as well as the number of cars voted.

In report for 1890, on page 99, is found the action of the association instructing its executive committee to see to it that the standards adopted by them as to couplers were maintained.

In report for 1891—commencing on page 114—is found report of this committee on the maintaining of standard contour lines of the standard coupler. This is expressly interesting and instructive in view of the testimony of Mr. Downey that the standard couplers of different make would not couple. Please see ————. In this connection the circular marked O, by Mr. Cloud, secretary of the association, and of the executive committee, is expressly important as it shows the careful work of these expert mechanics in maintaining the exact lines of the standard coupler, and that from now on every coupler of whose-soever make will and must be exactly alike, and couplers made by A and B will as surely couple and interchange as two couplers made by A, or two made by B.

Before leaving these reports, allow me once more to call your attention to the number of cars represented in these annual meetings of this association. This you will find in each report, on the page before the index page; and in that of 1891 you will find 991,564 cars represented, which were at that time practically all the cars of the nation. This shows how unanimously the railroads themselves have agreed upon this matter of a uniform type of standard coupler. Hence it would be a fearful mistake to enact any law that would in any way disturb this harmonious progress. Legislation should be in line of this work. This is all I now have to say on the coupler question.

I will incorporate in my remarks at this point extracts from a letter from Mr. C. J. Ives, president and general superintendent of the Burlington, Cedar Rapids and Northern system of railroads. This system spreads out through Iowa, Minnesota, and Dakota.

OFFICE OF PRESIDENT,
Cedar Rapids, Iowa, February 27, 1892.

MY DEAR SIR: I have yours of the 24th instant, in regard to the placing of automatic couplers on freight cars, and in reply would say that since the Iowa law went into operation we have placed no others on cars undergoing repairs and expect to continue this until all our cars are equipped. We are also endeavoring to fill

the demands of the law in respect to airbrakes on cars and engines. * * * The transitory period, as you say, is a dangerous one, but the casualties on that account have not been so serious as I expected. The movement you mention of switchmen to do away with all automatic couplers and go back to the link and pin, will, I trust amount to nothing, as the hundreds and thousands of dollars already expended by railway companies for the present automatic couplers would be simply lost and no advance made in regard to improvement in this direction. I can not think it possible that any committee of Congress would recommend anything of that kind. * * * As so much has already been done in regard to this work, I trust you may be successful in making it interstate, that all the benefit possible may be derived from the heavy expense to which the railroads have been subjected.

Yours, truly,

C. J. IVES, *President.*

L. S. COFFIN,
Washington, D. C.

Also, a letter from Mr. J. M. Whitman, the general manager of the Chicago and Northwestern system, of which road the chairman of this committee has perfect knowledge. This system controls between 4,000 and 5,000 miles of road.

Mr. Whitman, under date of March 14, says:

DEAR SIR: In reply to the inquiry contained in your favor of March 12 in reference to the question of automatic couplers for freight equipment and the measures reproduced before the National legislature referring to the same question. I have to say, that the Northwestern company has adopted what is known as the M. C. B. standard vertical plane coupler. It has been applying this coupler to its equipment for the last three years. The progress, however, during the first year was slow, as the device had to be perfected in several details of construction and in strength of material. We have, however, at present writing about 5,000 cars equipped with automatic couplers and airbrakes. We are also applying automatic couplers and airbrakes to some 5,000 freight cars purchased for this year's delivery, and in addition are applying automatic couplers and airbrakes to our old equipment as rapidly as possible.

The close of this year will show probably 12,000 cars in the equipment of the Northwestern Company provided with automatic couplers and airbrakes—a very rapid introduction of these two devices. I can say that we are thoroughly satisfied that the M. C. B. standard vertical plane coupler is a success and we are fully satisfied with the device we are using. I have no authentic statistics as to the number of cars equipped with automatic couplers in the United States, but I am of the impression that the number will approximate about 15 per cent of the entire freight equipment. It can therefore be seen that a very considerable progress has been made in this direction in view of the fact that it covers only about three years general application.

I know from present knowledge that almost all of the large railroad companies of this country are applying automatic couplers to all new equipment, and any legislation that would disturb the existing condition of things in respect to the M. C. B. standard coupler would to my mind be exceedingly disastrous to the object to be attained, as it would render questionable and uncertain the work that is now being done, and in addition thereto would undo practically the work of the best mechanical minds of the country covering the period of the past five years.

This is in brief our position in the matter, and I trust that it will furnish you the information that you desire.

Yours truly,

J. M. WHITMAN,
General Manager.

Mr. L. S. COFFIN,
Washington, D. C.

Permit me now to trespass for a little on your patience to discuss, very briefly, this brake question.

Many contend that a bill requiring "power" or "train" brakes—for they mean one and the same thing—is more necessary and important than one requiring automatic couplers. As a matter of fact there are nearly twice as many men killed yearly from being required to use handbrakes on freight than are killed from handling couplers, but there are not so many injured. The casualties are more fatal.

Statistics from the Interstate Commerce Commission reports show

that 557 were killed from falling from trains, and 2,348 injured in the year ending June 30, 1890. These men receive their death and injuries from being obliged to be on top of freight trains to use handbrakes. When is added to this the great number of accidents resulting from collisions, and running into open switches, and obstructions which could have been avoided had cars been equipped with power brakes under the immediate control of the engineer, the number would at least be swelled 50 per cent. The mere statement of this terrible fact, which no intelligent man will question, is all the argument that need be offered in favor of a law requiring that all interstate freight trains shall have enough cars in such trains equipped with power brakes so that the engineer can at all times control his train without requiring human beings to be at the cruel and inhuman exposure incident to the work of controlling trains by handbrakes.

This, too, when it is now admitted that if 20 to 30 per cent of the cars in a train are furnished with such power brakes that that train can be controlled easily and safely by the engineer, and at his instant wish.

I would call special attention to section 5 of the Henderson bill (H. R. 117, which is also in the printed report of my remarks of the hearing on March 2), which applies specially to this point. This provision should be incorporated in whatever bill the committee may see best to report, as it gives the railroad companies all the time they may need to fit up all their cars with power brakes, and still gives the employes immunity from exposure and danger, at a very early date. There are at the present time nearly, if not quite, 20 per cent of the freight cars already equipped with power-brakes, and a law requiring all trains run in interstate traffic to have in each train enough of these power-brake cars so as to give the control of the train into the power of the engineer, say two years from date, or say by the first day of January, 1894, would be the saving of at least 600 lives a year from that date, and an amount of human suffering and grief simply beyond words to express.

This will not impose any unreasonable burden upon the roads. All admit—I mean the railroad officials—that it is only a question of time when every car will have a power brake. A law as stated will compel the roads to see to it that the cars now equipped shall be so distributed and switched up to the head end of the train so as to be utilized.

When the fact is patent beyond all question of doubt that with trains so managed these lives can be saved and this awful suffering prevented, can you gentlemen have any doubt about using your unquestioned prerogative in the behalf of these men?

In closing this discussion allow me to impress upon the committee that I do not stand here before you as merely one individual man—endeavoring to give you my own views and wishes—and leaving you to think that possibly I may have some mercenary ends of my own to accomplish. I stand here authorized to speak for not less than 90,000—mark the great hosts—90,000 men who are every day in the practical work of handling the cars that must be moved in the commerce of this great nation. These 90,000 men are in organized orders, so that their voice can come to you in no uncertain sound.

I lay before you the letter from the grand officers of the great and powerful order of the Brotherhood of Locomotive Engineers, some 30,000 in number, as shown in the report of the House Committee on Railroads and Canals, on this same matter, at the last Congress, which report I herewith submit and call attention, not only to this letter of the grand officers of the Brotherhood of Locomotive Engineers, but to the petition of Slatterly, Barnard, Lyons, and Hardie and 9,678 others to

the Interstate Commerce Commission on this matter. The resolution of the conference of State railroad commissions with the national commission; to the letter from the grand lodge officers of the Brotherhood of Railroad Trainmen; to the letter of Hon. Eugene V. Dete, grand secretary and treasurer of the Brotherhood of Locomotive Firemen; to the resolutions passed by Grand Division of the Order of Railroad Conductors at their annual meeting at Rochester; to the resolution passed by the National Association of Railway Surgeons; to the petition of over 10,000 practical railway brakemen in actual service, to the last Congress, all found on pages 2, 3, and 4 of this report.

Please bear in mind that while this great number of everyday railroad men are making or attempting to make their voice heard by Congress, asking for laws giving them a reasonable degree of safety in their employment—the benefit of which you and the whole public reap—I repeat, please remember there is still an equal if not larger number engaged in this same dangerous work who do not belong to these organizations, and who find it difficult to be represented here in any official and effective way because of this fact, a fact which exists in many cases and on many systems of roads, because of the expressed demand of officials to withdraw at once from these orders if any have joined them, on pain of summary dismissal from the service if they do not. I say, besides those thus organized, there are at least 100,000 more of these trainmen who are looking to you for a law that will give them a chance to live.

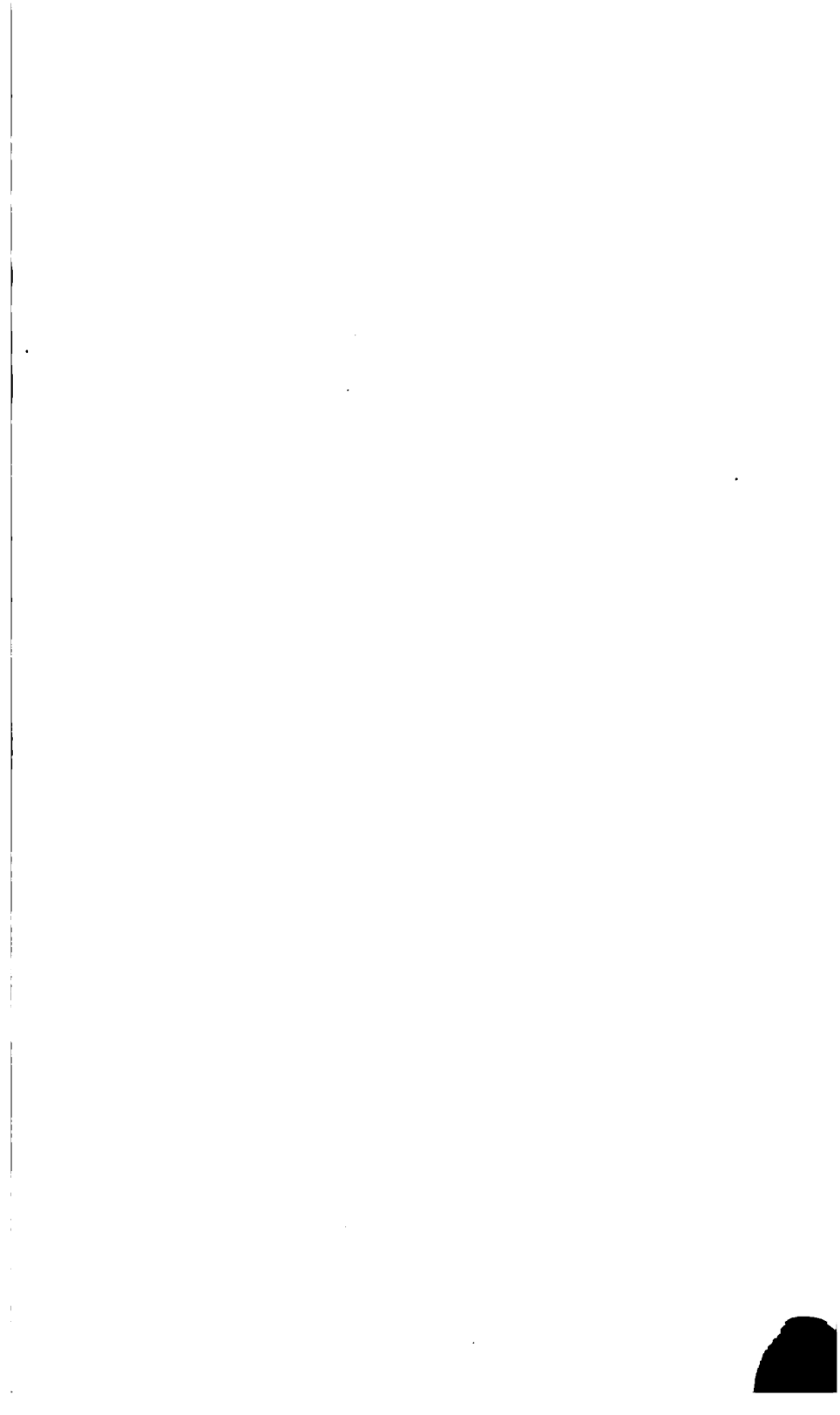
While all these practical men, numbering in these orders and out of them in the aggregate some 200,000 men, may not all agree on all the specific provisions of legislation asked, there is an absolute unanimity of sentiment and prayer for “uniformity” in these matters of couplers and brakes. They are willing to leave to your superior wisdom how that uniformity shall be brought about.

The views expressed by me before you in these hearings on the wisdom of a law running in harmony with the line already so clearly defined and so successfully being followed by the majority of the roads, and my opposition to any legislation that looks to creating a commission to select any specific coupler to be legalized by Congress, are my own individual views, my own best judgment, based on a very extended and exhaustive investigation of this whole matter during eight years past, leads me to say to the committee that the provisions of the Henderson bill (H. R. No. 117), are better calculated to bring the relief to the railroad employé asked for by them quicker and more effectually than it can be secured by any of the other bills now before Congress.

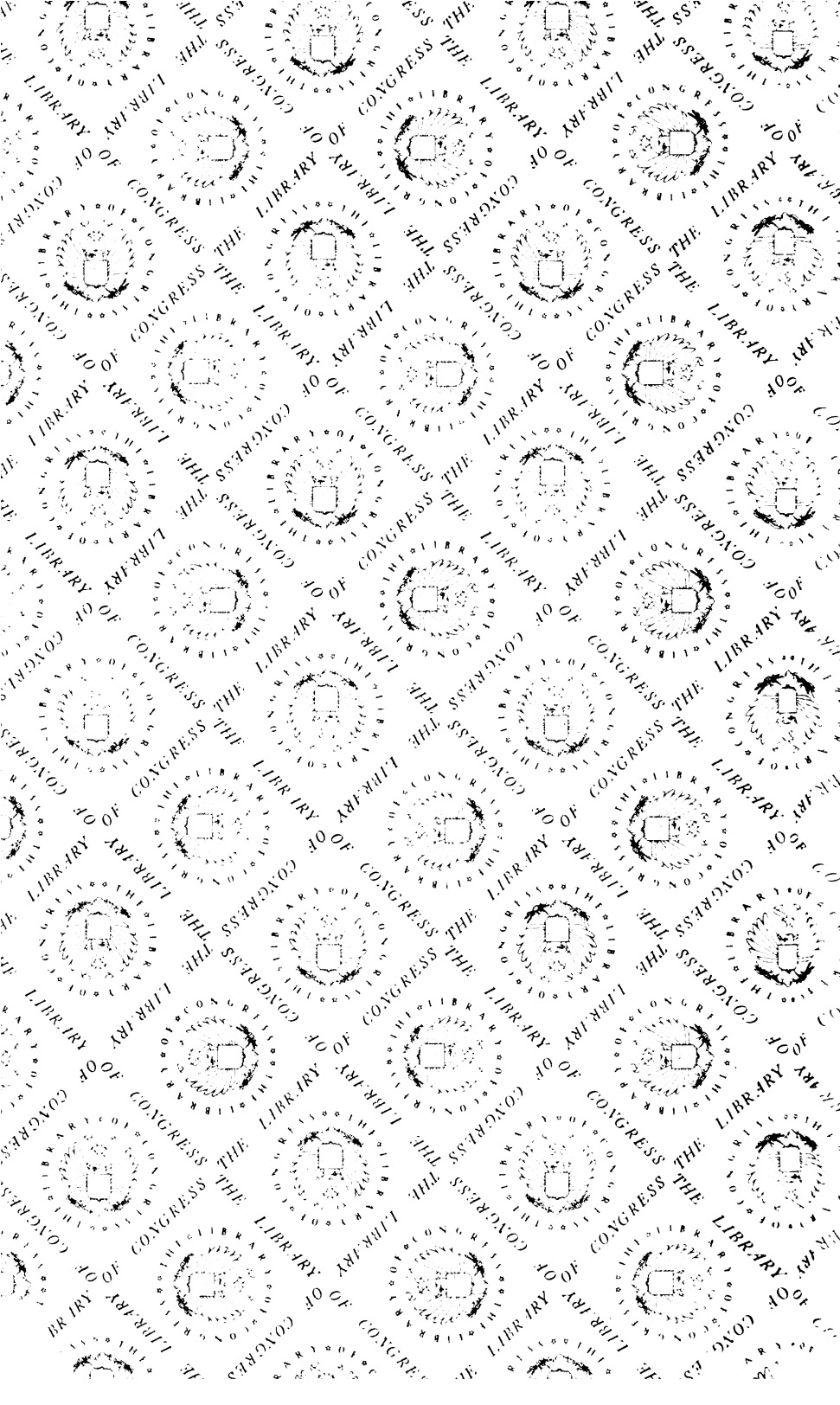
Still, I am not at all strenuous for this particular bill. If the wisdom of the committee will evolve a better and wiser one, none will be more ready to accept it than myself.

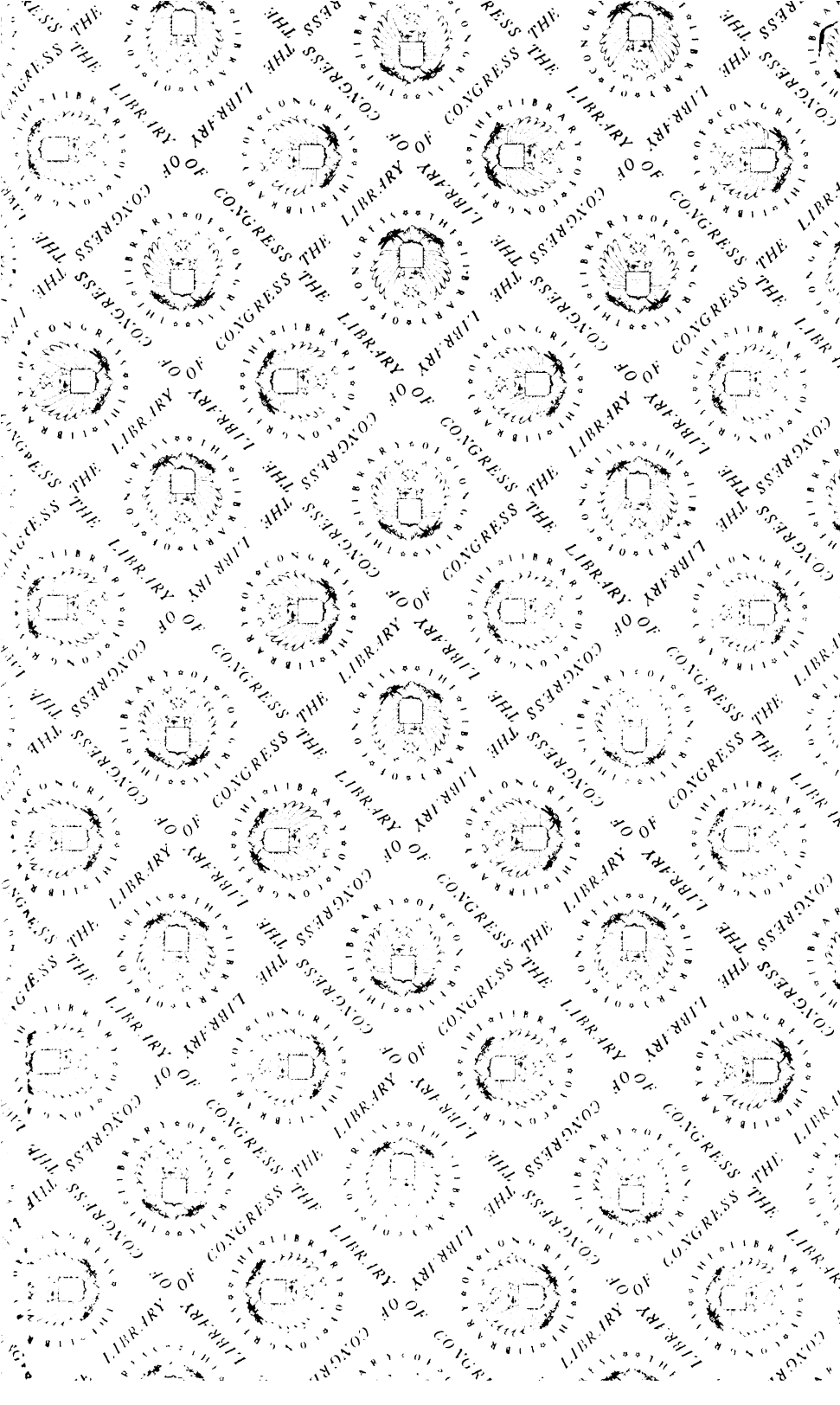
But I can not close this already, to you, too tedious hearing without urging upon you haste in this matter, whatever legislation you may see proper to report to the Senate. This awful work of death and suffering must be more or less extended, at the best, for a few years. Time will be required to make the necessary changes. What I plead for is that the beginning of the ending of this sacrifice of human life shall commence with as little delay as possible.

Bear this in mind, Senators, that the absolute and stern facts are, that from unquestioned data we know that an average of three of our fellows in the very prime of life must daily yield up life, and not less than thirty more must be made to suffer untold pain and loss of limb every day, while you are deliberating upon what is the proper way to









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